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ABSTRACT

Students at 12 of the 13 schools and colleges of optometry were surveyed for demographic, socioeconomic, and financial characteristics in 1975-76. The western region was found to have the highest ratio of students to population. Overall, students indicated they intend to practice in communities similar to those of their permanent residence. The students were generally white males, with a median parental income of approximately $17,000. The median available assets for financing optometric education were $766, and the amount was clearly related to class, with first-year students reporting the largest amount. The median expected cost, however, was $25,781 for four years, with the largest cost occurring in the first year. This finding was in direct contrast to results of a 1970-71 survey, in which fourth year costs were the highest. Eighty-two percent anticipated being in debt upon completion of their studies, with the median debt over $10,000. Parents and spouses provided the greatest average financial support among the 17 sources listed on the questionnaire. Scholarships, on the average, provided little support, though federal programs provided 14 to 31 percent. Data tables and the survey instrument are appended. (Author/MSE)

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SUMMARY

Students at the 13 schools and colleges of optometry were surveyed for demographic, socioeconomic and financial characteristics in 1975-76. Twelve of the 13 schools participated in the survey and submitted student questionnaires. The Western census region was found to have the highest ratio of students to population. Overall, students indicated that they intended to practice in communities similar to those of their permanent residence. Optometry students were, in large measure, white males. The median reported parents' income was approximately $17,000. There was no relationship between students' year of study and median parents' income. There was also no apparent relationship between parents' income and school control (public or private). There was a weak association between father's highest level of education and student's year of study. The median available assets for financing optometric education was $766.00 and was clearly related to class, with first year students reporting the greatest amounts. The median expected cost among survey respondents was $25,781 for four years, and this also was clearly related to class, with first year students anticipating the highest costs. This finding was in direct opposition to the findings reported for a 1970-71[1] survey, where fourth year students indicated the greatest costs. Eighty-two percent of the students anticipated being in debt for their optometric education, and the median amount was $10,585. Parents and spouses provided

[1]"How Health Professions Students Finance Their Education", DHEW Pub. No. (HRA) 74-13; U.S. DHEW, PHS, HRA, BHRD, DMI, October 1973.

the greatest average percent support among the seventeen sources listed on the questionnaire. Scholarships, on the average, provided very little support. Federal programs varied from 31.6 percent to 14.1 percent in the average percent of support provided. Overall, students drew on a wide variety of sources for financing their optometric education.

I. INTRODUCTION

For some time prior to 1975 the optometric community felt the need for detailed information about students enrolled in schools and colleges of optometry, particularly with respect to their financial resources for supporting their professional education. Some information was available on an individual school basis, but the lack of comparability of available data, both in content and format, among schools and colleges precluded the possibility of pooling and analyzing these data.

In the Spring of 1975, the representatives of the American Optometric Association (AOA), the Association of Schools and Colleges of Optometry (ASCO), and the Optometric Manpower Resources Project (OMRP) met to discuss the development and implementation of a survey of all students enrolled in the thirteen schools and colleges of optometry. Continuing discussions culminated in the design of a questionnaire to elicit the data felt necessary for describing the optometric student population (see Appendix I). This questionnaire was to be distributed to all students during the registration periods for the Fall 1975 term with the assistance of representatives of the American Optometric Student Association (AOSA). Two follow-up attempts were made during the academic year to elicit additional responses. The survey period ended in May 1976. Unfortunately, repeated attempts to secure the cooperation of the University of California, Berkeley, School of Optometry failed and no questionnaires were returned.

A limited amount of data was later obtained through the administration of the school. This presented some problems for data presentation and analysis which are discussed in greater detail in Appendix III, Methodology. All completed questionnaires were directed to the offices of the OMRP and locked in a private file room to insure confidentiality. Response rates by school and class were computed and adjusted as questionnaires were received. The overall response rate was approximately 70 percent of all first through fourth year students enrolled in the twelve schools and colleges of optometry for the academic year 1975-76 (see Appendix III). Due to lack of funds, further processing and analysis of these data were postponed until the award of this contract in September, 1977.

This report describes demographic, socioeconomic and financial resource characteristics of optometric students for 1975-76. Wherever comparable data were available from the 1970-71 survey of how health professions students finance their education, the data from the two survey periods were compared for time trends. The number of variables for which there was comparability was small, and thus, the analysis for trends was more limited in scope than desired. The body of the report presents analysis and discussion of findings. The detailed tables from which the analyses were done are included as Appendix II. Survey, processing, and analysis methodologies, as well as survey and item response rates, are included as Appendix III, Methodology.

II. GEOGRAPHIC DISTRIBUTION

State of permanent residence was requested of students as an indicator of where optometry students come from geographically and of the mobility of students in seeking optometric education, as well as the influence of school location on the ratio of optometry students to the resident population. The overall ratio of students who gave a state of permanent residence to the U.S. resident population was 1.8 students per 100,000 resident population. This ratio was highest in the West (2.1 per 100,000) and lowest in the South (1.5 per 100,000). The ratios in the Northeast and North Central regions were equal (1.9 per 100,000). On a regional basis, the number of schools was not a significant factor since each region had 3 schools, with the exception of the North Central region which had 4. This fourth school, however, had just opened and had only 21 first year students at the time of the survey. On an individual state basis, the ratio of students to population varied from 0.0 for the District of Columbia (implying only that there were no respondents from the District of Columbia) to 5.3 for Wyoming. The median ratio for the 50 states was approximately 1.6 students per 100,000 resident population. Using this median ratio as a dividing point, Table A shows the number of states with and without optometry schools with ratios of more and less than 1.6 students per 100,000 resident population.

Table A

	Ratio ≤ 1.6 per 100,000	Ratio > 1.6 per 100,000	TOTAL
Number of States With 1 or More Schools	3	9	12
Number of States With No Schools	25	14	39
Total Number of States	28	23	51

The chi-square test for independence applied to this contingency table of ratio and presence of school yields a statistic which is significant at the 5 percent confidence level ($X^2 = 6.09$; $X^2_{.05,1} = 3.84$). The inference that can be made is that indeed the presence of an optometry school in a state influences the number of state residents who pursue an optometric education. The numbers of students and the ratios for each state are given in Table 2 of Appendix II.

The mobility of students in seeking optometric education is somewhat reflected by the diversity of the location of schools attended by the students from within a state or region. Table B below gives the numbers of students from each region and how many were attending schools within their region.

Table B

Students Attending A School

Census Region	Within Region of Residence	Outside Region of Residence	TOTAL
Northeast	749	129	878
North Central	877	198	1075
South	811	211	1022
West	615	74	689
TOTAL	3052	612	3664

As would be expected, there is a very strong association between the region of residence and the location of the school attended ($X^2 = 33.85$; $X^2_{.05,3} = 7.815$). One would expect that the private schools would have students from a greater variety of regions, since residency would not have any effect on tuition. However, although 6 of the 13 schools are privately controlled, there is little student mobility on a regional basis. The same was generally true on a state by state basis, with students showing a pronounced proclivity for attending the optometry school or schools closest to their states of residence. Students from Michigan were distributed over the greatest number of schools (12) and students from Alabama, Alaska, and Oregon, the fewest (2 each). The detailed distribution of students by region/state of permanent residence and school attended is given in Table 2A (all students) and Table 2B (survey respondents only) of Appendix II.

Another indicator of mobility is whether or not students intend to practice in a community similar to that of their permanent residence. Each student was asked to classify his community of permanent residence as rural, suburban or urban. He was also asked to indicate the type of community in which he intended to practice upon completion of his optometric training. Looking only at the symmetrical portion of Table 3 of Appendix II for all classes combined, yields the following Table C for analysis.

Table C

Type of Community of Intended Practice	Rural	Suburban	Urban	TOTAL
TOTAL	321 (100.0%)	1248 (100.0%)	947 (100.0%)	3016 (100.0%)
Rural	525 (64.0%)	158 (13.0%)	137 (15.0%)	820 (27.0%)
Suburban	240 (29.0%)	979 (78.0%)	363 (38.0%)	1582 (53.0%)
Urban	56 (7.0%)	111 (9.0%)	447 (47.0%)	614 (20.0%)

It is the percentages on the diagonal that are of interest here. Students from suburban and rural communities generally intended to practice in similar communities with very little shift to urban areas. Students from urban communities, however, seem to have demonstrated more of an interest in shifting to less urban areas, particularly to suburban communities. Looking at the analagous data for each of the 4 classes indicates that the same inclinations were reported by students in each individual class as were evidenced overall.

III. RACIAL/ETHNIC BACKGROUND AND SEX DISTRIBUTION

Overall, 88 percent of optometry students were male and 12 percent female. Ninety-two percent of students were white, 7 percent were black, Asian or other, and 1 percent did not specify a racial/ethnic category. The proportion of minority students did differ by sex, as shown in Table D, with a noticeably greater proportion of female students who were other than white.

Table D

PERCENTAGE DISTRIBUTION BY RACIAL/ETHNIC CATEGORY AND SEX

	TOTAL	Male	Female
TOTAL	100.0	100.0	100.0
White	92.0	94.0	80.0
Non-White	7.0	5.0	19.0
Unknown	1.0	1.0	1.0

Additional data on the racial/ethnic background and sex distributions are presented in Table 4 of Appendix II.

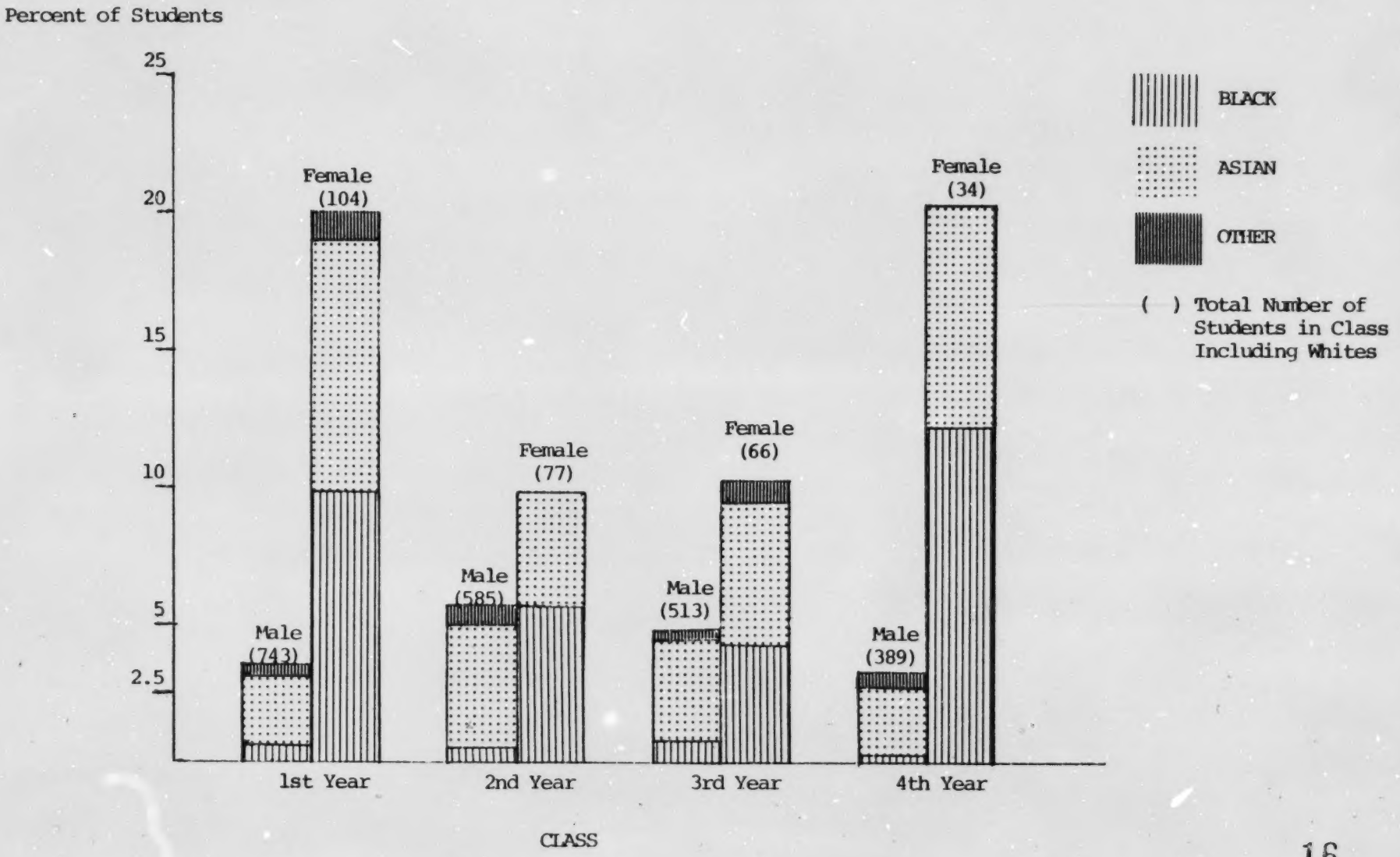
Among the 13 schools, only Berkeley and the Southern California College of Optometry had less than 90 percent of male students who were white, with these concentrated in the Asian category. Berkeley and the State University of New York, College of Optometry both had almost one-half of their female students indicate that they were non-white. The detailed distribution by school, sex and racial/ethnic background for all students is given in Table 5 of Appendix II.

Although it was intended to present data for all students by racial/ethnic background and sex by class, the differential response rates by class interacted with the by-school inflation

factors (see Appendix III, Methodology) in such a way as to produce distorted class figures. Thus, this discussion is based on data from respondents only. Figure 1 shows the total numbers of students by sex in each class and the percentage of those who are non-white. The number of male students who responded was twice as great for the first year class as for the fourth year class and the number of female students was three times as great for the first year class as for the fourth year class. This may be due to the much lower response rate among fourth year students than for other classes. Nevertheless, the percentage of non-white males differs only minimally from class to class. The proportion of non-white female students, however, has a curious distribution. The proportion of non-white females is approximately 20 percent in the first and fourth years, and only 10 percent in the second and third years. The reason for such a distribution is unclear. The specific numbers for each class/race/sex combination are presented in Table 6 of Appendix II.

Looking at the census division of permanent residence by racial/ethnic background (Table 7, Appendix II), we see that, as expected, the largest number of Asian students came from the Pacific division. The greatest proportions of black students came from the Mid-Atlantic and East North Central divisions. Although the Mid-Atlantic division accounts for 29 percent of black students, black students only comprise 3 percent of students from this division.

Figure 1. Percent of Non-White Students by Class and Race



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IV. SOCIOECONOMIC CHARACTERISTICS OF STUDENTS' PARENTS

Students were asked to estimate their parents' combined annual income. Recognizing that this was a sensitive item, categories for "Prefer not to respond" and "Don't know" were provided to minimize the impact on the survey response rate. Approximately one-fifth of the students availed themselves of these response categories. Based on the responses of the students who specified an income category (N = 1946), the median parental income was approximately $17,000 in 1975-76. The median parental income for optometry students reported in 1970-71 was approximately $10,200. Allowing for income inflation at 5 percent per year yields a 1970-71 adjusted median income of $13,000 which is still quite a bit below the reported 1975-76 median income. However, allowing for higher rates of inflation quickly erodes the difference, until at an income inflation rate of 10 percent per year for the 5 year interim period, the 1970-71 adjusted median income becomes $16,400; only slightly less than the 1975-76 median figure. Even though inflation may account for the apparent shift in the lower categories, the proportion of students reporting parental incomes greater than $20,000 appears considerably larger for 1975-76 than for 1970-71.

Another approach to investigating trends in parental income, over time, is to compare the median parental incomes

for each class year in 1975-76. Comparable data is not available for the 1970-71 survey.

There was no apparent relationship between class and median parental income, and also there was no shift in socioeconomic status of optometry students, as measured by income, from 1971 to 1975, the entering years of these students. The detailed distributions of parents' income by class is presented in Table 8 of Appendix II.

A question often asked about optometry schools is whether or not they differ with respect to socioeconomic status. Table E below shows the median incomes for each school. The schools are divided into two categories--state and private.

Table E

1. State Schools[1]	N	Median Parental Income
SUNY	73	$14,100
Alabama	76	14,500
Ferris	18	17,500
Houston	114	17,800
Indiana	208	17,300
Ohio	133	16,700
2. Private Schools		
Illinois	342	17,500
New England	119	15,600
Pacific	163	14,900
Pennsylvania	233	18,000
SCCO	243	17,600
Southern	228	17,300

[1] Berkeley excluded; no responses available.

There is some apparent variation of median income, notably between the State Univeristy of New York and the Pennsylvania College of Optometry. However, using the overall

median income as a dividing point, there was no significant difference between private and state schools with respect to median parental income. Table 8 in Appendix II contains the detailed data reported by students at each school.

Data for one additional socioeconomic indicator were collected from optometric students. Each student was asked to indicate the highest educational levels of his father and mother. A combined variable of parents' education was generated from these responses. For 45 percent of the optometry students who responded to this item, the highest level of education was the same for both parents. For 20 percent of the students, both parents had at least some college education. Only 6 percent of students reported that neither parent had completed high school. The categories used in the 1970-71 health professions' student survey[2] dealt with father's educational level only, but were similar enough to generate Table F for comparison.

Table F

Father's Highest Educational Level	1970-71	1975-76
Total	100.0%	100.0%
Not High School Graduate	10.0%	13.6%
High School Graduate or Vocational Training	34.0%	28.7%
Attended and/or Completed College	24.0%	32.7%
Graduate or Professional Training	22.0%	24.1%

[2] OpCit.

There does seem to have been a shift in the highest educational level of fathers of optometry students. Although a slightly greater proportion of optometry students surveyed in 1975-76 reported that their fathers had not completed high school, 57 percent reported post high school education for their fathers in 1975-76 as opposed to 46 percent in 1970-71. This is particularly interesting in light of the fact that the comparison of parents' median income for the two survey years did not indicate an increase over time, once inflation was taken into account.

Another way to approach this question is to look at parents' education by student's class for the 1975-76 survey data alone. These data are presented in detail in Table 9 of Appendix II. Table G was used to test for association of father's educational level with student's class.

Table G

Father's Education	TOTAL	1st Year	2nd Year	3rd Year	4th Year
TOTAL	2446	822	642	566	416
Not High School Graduate	336	109	83	88	56
High School/Vocational	708	220	195	167	126
College	808	291	207	194	116
Graduate/Professional Training	594	202	157	117	118

Chi-square for this table was significant at the 10 percent level, but not at the 5 percent level indicating a weak association between father's education and student's class.

Examination of the distributions of parents' educational level among the schools was based on the following table of proportions (Table 4) extracted from Table 10 of Appendix II.

Table H

School	Educational Leval Reported by Greatest Proportion of Students	Proportion	Father College, Mother HS[1]	Father GP[1], Mother College
Overall	Both High School	19.3	13.5	12.2
SUNY	Both High School	23.9	13.0	5.4
Ferris	Father College, Mother HS	25.0	25.0	0.0
Alabama	Both College	15.4	14.3	13.2
Houston	Father GP, Mother College	17.8	8.9	17.8
Illinois	Father GP, Mother College	16.2	14.1	16.2
Indiana	Both High School	24.2	12.7	10.3
New England	Both High School	21.1	11.8	10.6
Ohio	Both High School	24.8	18.8	8.5
Pacific	Both High School	22.6	10.3	11.8
Pennsylvania	Both High School	24.6	15.5	8.7
SCCO	Both College	20.5	14.0	14.0
Southern	Both College	16.4	12.8	12.5

[1] HS = High School; GP = Graduate or Professional Training.

It is interesting that over all schools, the parents' educational level reported most frequently was "both parents completed high school" and that the categories in the other two columns of Table H above were not reported more frequently. It is somewhat surprising that there is noticeable variation among the schools and that the students from only two schools most frequently reported father's education as graduate or professional and mother's education as college. The reason that this is of note is that "common knowledge" within the

profession has in the past been that optometry students come in large measure from professional families which often have one parent who is an optometrist. The data in Table H are in opposition to this opinion. Another point of interest to be seen in these data is that in the schools whose students most frequently reported high school completion as the highest level of education for both parents, the proportions of students who most frequently reported high school completion as the highest level of education for both parents were considerably greater than the proportions of students who reported either "Father College, Mother High School" or "Father Graduate or Professional, Mother College" as the highest levels of parents' education.

V. FINANCING OPTOMETRIC EDUCATION

Students were asked to estimate their current total dollar assets available for financing the remainder of their education; excluding loans, scholarships and anticipated earnings. Fully 28 percent of the students who gave an estimate reported assets of less than $200 and only 17 percent reported assets of more than $3,000. The median for available assets was approximately $766. The median assets reported for each class are given in Table I below.

Table I

Class	Median Assets
All Classes	$ 766
First Year	1147
Second Year	710
Third Year	671
Fourth Year	477

There was clearly a relationship between class and assets, and indeed the chi-square for association was significant at the 1 percent level. It is not surprising that students' assets dwindle during their optometric education since few optometric professional programs provide the flexibility of schedule necessary for appreciable amounts of money to be earned. The detailed data on this distribution is presented in Table 11 of Appendix II.

The next question was whether or not the amount of available assets differed by school. There was no relationship between school control (private or state) and median student assets. The median available assets for each school are given in Table J in rank order.

Table J

School	Median Assets
SUNY	$1235
Ohio	1031
Ferris	999
Illinois	883
Southern	844
SCCO	803
Pacific	786
Houston	780
Pennsylvania	722
New England	526
Alabama	499
Indiana	414

The school whose students had the highest median was SUNY, and this was about three times the median for Indiana students. This considerable variation was not related to school control nor was it related to the census region in which the school was located. There was also no apparent correlation with school rank by parents' median income. There were no comparable data available from the 1970-71 survey with which to make a comparison.

Students were also asked to approximate their expected costs for financing their four years of optometric education; including living expenses, tuition, supplies, etc. The median expected cost among survey respondents was $25,781 for four years or a median annual cost of $6,445. The 1970-71 survey reports an average annual expense of $5,251, but it is not clear whether this is a mean or median figure. The mean expected cost for the 1975-76 survey respondents was $26,008 or $6,502 per annum (with standard deviations of $7,876 and $1,969, respectively). If the 1970-71 figure was a mean, comparison with the 1975-76 mean annual expected cost yields

a 24 percent increase. Table K below shows the median and mean total and annual costs for 1975-76 and the "average" annual costs for 1970-71 by class.

Table K

Class	1975-1976 Median 4 Year Cost	1975-1976 Median[1] Annual Cost	1975-1976 Mean 4 Year Cost	1975-1976 Mean[2] Annual Cost	1970-1971 "Average" Annual Cost
TOTAL	$ 25,781	6,445	26,008	6,502	5,251
First Year	26,311	6,578	26,268	6,567	4,668
Second Year	25,875	6,469	26,245	6,561	5,171
Third Year	25,559	6,390	25,848	6,462	5,669
Fourth Year	24,615	6,154	25,347	6,337	5,764

[1]Median annual cost = 1/4 x median four year cost.
[2]Mean annual cost = 1/4 x mean four year cost.

There was an apparent relationship between expected costs and class. For the 1975-76 survey data, chi-square for association was significant at the 5 percent level ($X^2 = 30.09$; $X^2_{.05,18} = 28.87$). The trend indicated by these data, that first year students expected their costs to be higher than fourth year students, is consistent with the economics of the period. It is of note that the 1970-71 data exhibit a trend in the opposite direction. Although the two questionnaire items differed somewhat, this would not account for the trend reversal.

The median expected four year and annual costs were also examined for variation among the 12 schools for which data were available. In Table L, the schools are listed in rank order with respect to median four year expected cost.

Table L

Rank	School	Median Expected Four Year Cost	Median Expected Annual Cost
1	Southern	$31,726	$7,932
2	New England	28,667	7,167
3	Pennsylvania	27,315	6,829
4	SCCO	27,235	6,809
5	Illinois	27,122	6,781
6	Pacific	27,083	6,771
7	Alabama	24,500	6,125
8	SUNY	20,714	5,179
9	Indiana	20,541	5,135
10	Houston	19,375	4,844
11	Ferris	18,545	4,636
12	Ohio	17,474	4,368

This table shows considerable variation in students' expected costs for their optometric educations at the various schools. It should be noted here that all of the schools with median expected costs greater than the overall median ($25,781) are privately controlled and all of the schools with median expected costs less than the overall median are state-controlled. The frequency distributions of expected costs by class and school are presented in Table 12 of Appendix II.

Future financial burden on the student was sought by asking each student to estimate his total indebtedness at graduation. Overall, for 82 percent of students responding, expected indebtedness was greater than zero, with a median of $10,585. Table M shows the proportion of each class who expected to be in debt and their median expected amount of indebtedness.

Table M

Class	Percent of Students With Expected Indebtedness	Median Amount
Overall	82.0	$ 10,585
First Year	83.8	11,500
Second Year	83.9	10,716
Third Year	82.5	10,048
Fourth Year	75.5	8,773

Not only did a greater proportion of the first through third year students expect to be in debt at graduation, but also they anticipated larger debts. This finding is consistent with the greater anticipated costs for the first through third year students. The questionnaire item on the 1970-71 survey relating to indebtedness was sufficiently different to preclude any comparison on this point.

The proportion of students with anticipated indebtedness and the median expected amount were also analyzed by school. Table N lists the schools in rank order by the proportion of students anticipating debts. The median expected indebtedness and the rank for that amount are also given.

Table N

Rank	School	Percent of Students	Median Debt	Rank
1	Ferris	93.8	6,500	10
2	Alabama	87.8	9,999	6
3	Illinois	86.0	11,486	3
4	SCCO	85.4	11,302	4
5	SUNY	84.5	8,778	8
6	Pacific	84.1	9,500	7
7	New England	83.4	10,606	5
8	Pennsylvania	83.2	>12,000[1]	1.5
9	Southern	82.1	>12,000[1]	1.5
10	Indiana	80.3	7,999	9
11	Ohio	70.5	5,500	12
12	Houston	64.4	6,267	11

[1]Median not computable; amount in open-ended category.

It should be noted that Ferris had only a first year class at the time of this survey and a large proportion of these students responded that they did not know what their indebtedness would be. It is interesting that the median amount of expected indebtedness at a school did not vary consistently with the proportion of students at the school who anticipated any indebtedness. It is also of note that fewer than two-thirds of the students at Houston reported any expected indebtedness at all and for those that did, the median was the second smallest among the schools. The frequency distributions for expected indebtedness by class and school are presented in Table 13 of Appendix II.

Information about the sources available to optometry students for financing their education was a motivating factor in conducting this survey. Students were asked to indicate their sources and the percent of support provided by each source.

The 17 possible sources listed in the questionnaire item, ranked by the average percent support provided by each source, the number of students contributing to the average, and the average percent support are shown in Table 0.

Table O

Source	Rank	Average Percent Support	Number of Students
Parents	1	46.8	1542
Spouse	2	43.6	896
Military	3	37.0	269
Federal Guaranteed Student Loan	4	31.6	986
Other Loan	5	26.2	264
Other	6	26.0	210
Health Professions Student Loan	7	20.7	793
Self (not work study)	8	18.5	860
Summer Employment	9	17.5	1575
State Scholarship	10	15.8	238
Health Prcfessions Scholarship Program	11	14.1	263
Fellowship	12	13.8	22
Other Scholarship	13	12.9	86
Self (work study)	14	12.1	451
Private Industry Scholarship	15	10.1	19
School Scholarship	16	8.8	81
Optometric Society Scholarship	17	8.6	41

As would be expected, parents and spouses provided the greatest amount of support for students who indicated them as a source. Scholarships contributed only a small percentage of support to the students who had indicated them as a source. It is interesting that summer employment was the most frequently reported source of support, but that the average percent support thus provided was only 17.5 percent. Clearly optometric students finance their educations from a variety of sources of which no single source, on the average, provides more than 50 percent support.

The rank order distributions of financial sources for each individual class year were very similar. The only notable class differences were that the average percent support

provided by the military was lower for the first year class (28.5%) than for the other classes (second year, 43.4%; third year, 42.8%; fourth year, 35.1%) and that the average percent support provided by fellowships was much lower for the fourth year class (9.8%) than for the other classes for which it was about 20 percent. The detailed data are presented in Table 14 of Appendix II. The data presented on sources of income from the 1970-71 survey is not comparable with the 1975-76 data.

VI. PRE-OPTOMETRIC EDUCATION AND EXPECTED ACTIVITY OF STUDENTS

It was hoped that students would provide adequate responses to the questionnaire item which asked that they list all post high school education, major field and degrees, if any, received. From this information, highest degree received and field in which awarded would be determined. However, only 62 percent of students provided usable data for this item. Based on the data provided by these students alone, the following are made as comments only. Approximately 85 percent of these students reported at least Bachelor's level pre-optometric education. There were 9 percent with Associate level degrees and 6 percent with Master's level degrees. Only three students reported completing a Doctoral level degree prior to entering optometry school. Among those students who responded to this item, 52 percent majored in the biological sciences. The next most frequently reported major field was the social sciences. None of the remaining major field categories was reported by 10 percent or more of the students. The proportion of students responding to this item by school varied drastically and, therefore, no analysis of these data was done. The response distributions are presented in Table 15 of Appendix II.

As an attempt to get a feel for what students intend to do after completing their optometric educations, each was asked to indicate his initial and ultimate expected activity after graduation. Eighty-six percent of the respondents did complete this item. The percentage distributions

of initial and ultimate expected activity by class are given in Table 16 of Appendix II. Although few students responded that they did not know what they would do (2.0% initial, 1.5% ultimate), a fair number checked more than one category (12.2% initial, 7.5% ultimate). A much larger number of activities was checked for initial than ultimate intended activity. Table P below lists the most frequently reported activities and the percentages of students who so indicated for initial and ultimate activity.

Table P

Activity	Percent of Students	
	Initial	Ultimate
Set up Practice	13.2	49.3
Enter Partnership	21.7	15.5
Multidisciplinary Group	2.6	6.9
Enter Optometric Group	4.9	5.9
Work for Optometrist	24.3	0.5
Enter Military	6.0	0.2
TOTAL	72.7	78.3

These six categories accounted for most of the students, as seen by the total percentages. It is of note that although approximately 24 percent of students expected to work for another optometrist initially, only 0.5 percent expected to be so engaged ultimately.

Looking at these same six categories of activity by class year, where they also account for most students, there are some interesting class differences. The percentage of students who expect to set up practice increases with increasing class year as an initial intended activity (11.8% to 19.4%), but decreases with increasing class year as an ultimate activity (55.4% to 39.6%). Conversely, the percentage of

students who expect to enter a partnership decreases with increasing class year as an initial intended activity (23.4% to 18.3%), but increases with increasing class year as an ultimate activity (12.1% to 21.3%). The same pattern holds for the percentages of students expecting to enter an optometric group. The proportion decreases with class year as an initial activity (6.9% to 3.0%), but increases with class year as an ultimate activity (5.0% to 7.3%). These reversals of intention may be indicative of fourth year students being more familiar with and more realistic about optometric practice.

VII

APPENDICES

PLEASE DO NOT WRITE IN THIS SPACE

THE ASSOCIATION OF SCHOOLS & COLLEGES OF OPTOMETRY

NATIONAL CENSUS II

ENROLLED STUDENTS IN OPTOMETRIC EDUCATION

SCHOOL/COLLEGE _____

PLEASE PRINT OR TYPE ALL RESPONSES

1. NAME: _____ (last) _____ (first) _____ (middle initial)

2. LOCAL RESIDENCE IDENTIFICATION: _____ (city) _____ (state)

3. PERMANENT RESIDENCE IDENTIFICATION: _____ (city) _____ (state)

4. STATE OF LEGAL RESIDENCE: _____

5. CITIZENSHIP: ___U.S. ___OTHER, _____ (please specify)

6. SEX: ___M ___F

7. DATE OF BIRTH: ____ - ___ - ____ (month day year)

8. RACIAL/ETHNIC BACKGROUND:

___White/Caucasian
___Black/Negro
___Chinese
___Japanese
___Other Asian
___American Indian
___Other _____ (please specify)

CHECK ALSO IF APPLICABLE

___Mexican American (Chicano)
___Puerto Rican
___Other Latin American
___Prefer not to respond

9. MARITAL STATUS: ___Not Married ___Married ___no. of Dependents children + other(s)

10. MILITARY SERVICE: ___None ___Expect to serve

___Have served _____ (Branch) _____ (from) _____ (to)

___Selective Service Classification

11. COMMUNITY OF PERMANENT RESIDENCE:

___Rural ____(population)*

___Suburban ____(population)*

___Urban ____(population)*

*Approximate

12. HIGHEST LEVEL OF EDUCATION OF PARENTS:

FATHER

Did not complete high school ___
High school graduate ___
Attended college ___ ____ completed degree & field
___did not complete degree

Graduate or Professional school ___ ____ completed degree & field
___did not complete degree

MOTHER

Did not complete high school ___
High school graduate ___
Attended college ___ ____ completed degree & field
___did not complete degree

Graduate or Professional school ___ ____ completed degree & field
___did not complete degree

13. PARENTS' OCCUPATION: _____FATHER

_____MOTHER

*(If retired or deceased, please specify with an R or D or written comment)

14. What was the estimated amount of your parents' combined annual income for last year?

___less than $5,000 ___$15,000-19,999 ___prefer not to respond*

___$5,000-9,999 ___$20,000-29,999

___$10,000-14,999 ___over $30,000 ___do not know

*(please refer to the clause on protection of confidentiality in cover letter)

15. Approximately what are your total costs expected to be for financing all four years of your optometric education (including reasonable living costs, transportation, tuition, supplies, etc.)

___$5,000-9,999	___$25,000-29,999
___$10,000-15,999	___$30,000-34,999
___$16,000-19,999	___over $40,000
___$20,000-24,999	___do not know

16. Please indicate below your sources for financing your optometric education and please approximate the percentage each source provides.

SOURCE	% OF SUPPORT
___Parents & other relatives	_____
___Spouse	_____
___Self (Work study other than industrial)	_____
___Self (Not work study)	_____
___Summer employment	_____
___Military _____ (please specify)	_____
___Federal Guaranteed Student Loan (Banks)	_____
___Health Professions Student Loan Program	_____
___Other Loan _____ (please specify)	_____
___Health Professions Scholarship Program	_____
___State Scholarship	_____
___School/College Scholarship	_____
___Optometric Society Scholarship	_____
___Private Industry Scholarship (e.g. B&L, AO)	_____
___Other Scholarship _____ (please specify)	_____
___Fellowship _____ (please specify)	_____
___Other _____ (please specify)	_____

17. Approximately what are your present/current total dollar assets available* for financing the remainder of your optometric education, excluding loans and scholarships?

*(Not considering anticipated earnings)

___$0-199	___$3000-9,999
___$200-499	___over $10,000
___$500-999	
___$1000-1,999	___prefer not to respond
___$2000-2,999	___do not know

18. APPROXIMATELY what will be your expected total indebtedness for your optometric education at the time of graduation?

___$0	___$6000-7,999	___over $12,000
___over $0-2,999	___$8000-9,999	___prefer not to respond
___$3000-5,999	___$10,000-11,999	___do not know

19. Will you be employed during the school year? ___yes ___no

If yes, how many hours/wk? ___0-8 ___24-36
___8-16 ___over 36
___16-24

EDUCATION:

20. What year did you graduate from high school (or equivalent)? _____

21. Location of most recent high school:

_____ city _____ state _____ country

22. COLLEGES ATTENDED: (Please list most recent college first)

NAME	LOCATION	Yrs From	Yrs To	Yr Grad	Cert/Deg Recv'd	Major* Field
1.						
2.						
3.						
4.						
5.						

*CHOOSE FROM THE FOLLOWING:
1. Biological/Life Sciences (e.g. Biology, Physiology)
2. Physical Sciences (e.g. Physics, Chemistry)
3. Mathematical Sciences (e.g. Mathematics, Statistics, Computer Science)
4. Social Sciences (e.g. Political Science, History, Philosophy, Psychology, Sociology, Anthropology)
5. Earth Sciences (e.g. Geology, Ecology)
6. Humanities (e.g. Literature, Languages, Fine Arts)
7. Engineering
8. Other, _____ (please specify)

23 Did you seriously consider applying to other Health Professional Schools?

___yes ___no If yes, which one(s):

___Dentistry
___Medicine
___Nursing
___Osteopathy
___Pharmacy
___Podiatry
___Veterinary Medicine
___Other _____ (please specify)

___prefer not to respond*

*please comment

24. Did you apply to other optometry schools in addition to the one you now attend? ___yes ___no

___Alabama (Birmingham)
___Berkeley
___Ferris State
___Houston
___Illinois
___Indiana
___Massachusetts
___Montreal
___SUNY (New York)
___Ohio
___Pacific
___Pennsylvania
___Southern (Memphis)
___SCCO (Fullerton)
___Waterloo
___Other

25. What year did you first enter optometry school? _____

26. What year do you EXPECT to graduate? _____

27. Of which class are you a member? (Please check where applicable)

___4 year O.D. Program
___1st year
___2nd year
___3rd year
___4th year
Day or Evening Program (circle one)

___ 2 year O.D. Program
___ 1st year (Ph.D.)
___ 2nd year (Ph.D.)

Graduate Programs
___ Physiological Optics
Year? _____
Degree? _____

28. Please indicate below the areas of primary interest to you and if you intend to specialize in one of them.

	OF INTEREST	INTEND TO SPECIALIZE
Pediatrics	___	___
Geriatrics	___	___
Contact lenses	___	___
Vision training/orthoptics	___	___
Low vision	___	___
Developmental Vision	___	___
Industrial/Environmental/Occupational Vision	___	___
Public/Community Health Optometry	___	___
Aniseikonia	___	___
Other_____ (please specify)	___	___

29. What do you intend to do when you graduate from optometry school? (please check only one in each column)

INITIALLY		ULTIMATELY
___	Set up my own private practice.....	___
___	Enter a partnership practice.....	___
___	Enter a group practice.....	___
___	Participate in a multidisciplinary group practice	___
___	Participate in a Health Maintenance Organization.	___
___	Work for another optometrist as an associate....	___
___	Work for an ophthalmologist.....	___
___	Work for a physician other than ophthalmologist..	___
___	Work for the Federal Government (PHS, VA).....	___
___	Enter the Military.....	___
___	Work for state or local government.....	___
___	Work at an Optometric Clinical Center.....	___
___	Work for a non-profit organization (association, church, foundation, etc.).....	___
___	Work for a manufacturer or business firm.....	___
___	Enter a graduate school in a visual science disc.	___
___	Enter graduate school in a discipline other than visual science (e.g. M.P.H.).....	___

30. In what type of community do you intend to practice?

___Rural (_____ population*) ___Suburban (_____ population*) ___Urban (_____ population*)

___Critical shortage area (Loan Forgiveness Program)

*Approximate

31. Please describe briefly how and why you selected the type of community you indicated above for a practice location. (check one or more)

___Financial (Loan Forgiveness, etc.)
___Community Service organization available (e.g. Lions Club, Rotary Club, Kiwanis International, etc.)
___Proximity to family
___Established practice (relative, friend, etc.)
___Public Health (Critical shortage area, lack of vision care, but not other health care, etc.)
___Other _____
(please specify)

32. Please indicate suggestions concerning this questionnaire below. List the question number and specific comments. If no comment, please specify.

TABLES

1. Number of Optometry Students per 100,000 Resident Population: 1975-1976.

2A. Number of Optometry Students by State of Permanent Residence and School Attended: 1975-1976. (All Students)

2B. Number of Optometry Students by State of Permanent Residence and School Attended: 1975-1976. (Survey Respondents Only)

3. Number and Percent of Optometry Students by Type of Community of Permanent Residence and Intended Practice: 1975-1976. (Survey Respondents Only)

4. Number of Optometry Students by Racial/Ethnic Background and Sex: 1975-1976. (All Students)

5. Number of Optometry Students by Racial/Ethnic Background, Sex and School Attended: 1975-1976.

6. Number of Optometry Students by Racial/Ethnic Background, Sex and Class: 1975-1976. (Survey Respondents Only)

7. Number of Optometry Students by Racial/Ethnic Background and State/Region of Permanent Residence: 1975-1976.(All Students)

8A. Number of Optometry Students by Parents' Income, School and Class: 1975-1976. (Survey Respondents Only)

8B. Percent Distribution of Optometry Students by Parents' Income School and Class: 1975-1976. (Survey Respondents Only)

9. Number of Optometry Students by Parents' Education and Class: 1975-1976. (Survey Respondents Only)

10. Number of Optometry Students by School Attended and Parents' Education: 1975-1976.

11. Number of Optometry Students by Assets Available, School and Class: 1975-1976. (Survey Respondents Only)

12. Number of Optometry Students by Expected Costs, School and Class: 1975-1976. (Survey Respondents Only)

13. Number of Optometry Students by Expected Indebtedness, School and Class: 1975-1976. (Survey Respondents Only)

14. Optometry Students' Resources for Financing Optometric Education by Rank Order and Average Percent Support by Class: 1975-1976. (Survey Respondents Only)

15. Number of Optometry Students by Pre-Optometric Education, Major Field and Optometry School Attended: 1975-1976. (Survey Respondents Only)

16. Percent of Students by Class and Initial and Ultimate Intended Activity: 1975-1976. (Survey Respondents Only)

Appendix Table 1

NUMBER OF OPTOMETRY STUDENTS PER 100,000 RESIDENT POPULATION: 1975-1976

Location	Resident Population (in thousands)	Number of Students[1]	Students Per 100,000 Population
Total	-	3900	-
U.S. Total	213,032	3878	1.8
Non-U.S.	-	22	-
REGIONS			
Northeast	49,456	925	1.9
North Central	57,636	1100	1.9
South	68,041	1046	1.5
West	37,899	804	2.1
DIVISIONS			
New England	12,187	251	2.1
Mid Atlantic	37,269	674	1.8
East North Central	40,945	827	2.0
West North Central	16,690	273	1.6
South Atlantic	33,658	472	1.4
East South Central	13,515	231	1.7
West South Central	20,867	343	1.6
Mountain	9,625	157	1.6
Pacific	28,274	647	2.3
STATES			
Alabama[2]	3,615	66	1.8
Alaska	365	4	1.1
Arizona	2,212	26	1.2
Arkansas	2,110	55	2.6
California[2]	21,198	346	1.6
Colorado	2,541	24	1.0
Connecticut	3,100	49	1.6
Delaware	579	11	1.9
District of Columbia	712	0	0.0
Florida	8,277	128	1.6
Georgia	4,931	48	1.0
Hawaii	868	23	2.7
Idaho	813	12	1.5
Illinois[2]	11,197	190	1.7
Indiana[2]	5,313	182	3.4
Iowa	2,861	70	2.5
Kansas	2,280	47	2.1
Kentucky	3,387	40	1.2
Louisiana	3,806	46	1.2
Maine	1,068	29	2.7
Maryland	4,122	71	1.7

Appendix Table 1

NUMBER OF OPTOMETRY STUDENTS PER 100,000 RESIDENT POPULATION: 1975-1976

Location	Resident Population (in thousands)	Number of Students	Students Per 100,000 Population
Massachusetts[2]	5,814	132	2.3
Michigan[2]	9,111	133	1.5
Minnesota	3,921	43	1.1
Mississippi	2,341	37	1.6
Missouri	4,767	37	0.8
Montana	746	27	3.6
Nebraska	1,544	40	2.6
Nevada	590	9	1.5
New Hampshire	812	10	1.2
New Jersey	7,333	77	1.1
New Mexico	1,144	16	1.4
New York[2]	18,076	300	1.7
North Carolina	5,441	78	1.4
North Dakota	637	17	2.7
Ohio[2]	10,735	225	2.1
Oklahoma	2,715	67	2.5
Oregon[2]	2,284	116	5.1
Pennsylvania[2]	11,860	260	2.2
Rhode Island	931	15	1.6
South Carolina	2,816	33	1.2
South Dakota	681	14	2.1
Tennessee[2]	4,173	86	2.1
Texas[2]	12,237	168	1.4
Utah	1,203	14	1.2
Vermont	472	7	1.5
Virginia	4,981	54	1.1
Washington	3,559	52	1.5
West Virginia	1,799	35	2.0
Wisconsin	4,589	75	1.6
Wyoming	376	20	5.3
Unknown	0	214	0

Source: Data - Survey of Students Enrolled in Schools/Colleges of Optometry, 1975-1976.
Resident Population - U.S. Bureau of the Census, Population Estimates and Projections. P. 25, No. 642

[1]Based on reported State of Permanent Residence.
[2]State containing an Optometry School/College.

Appendix Table 2A

NUMBER OF OPTOMETRY STUDENTS BY STATE OF PERMANENT RESIDENCE AND SCHOOL ATTENDED; 1975-1976

(All Students)

Location	Total	School/College of Optometry												
		Berkeley	State Univ. of New York	Alabama	Ferris	Houston	Illinois	Indiana	New England College of Optometry	Ohio	Pacific	Pennsylvania	Southern Calif. College of Optometry	Southern
Total	3900	236	103	107	21	268	571	280	285	217	303	552	364	592
U.S. Total	3663	126	94	105	21	257	568	263	245	213	289	538	354	590
Non-U.S.	23	0	3	1	0	5	0	4	2	0	5	2	1	0
REGIONS														
Northeast	878	6	93	1	0	0	48	15	225	4	11	431	23	21
North Central	1075	5	1	1	21	29	440	217	7	199	39	7	40	69
South	1022	2	0	102	0	220	42	24	10	5	9	99	20	489
West	689	113	0	0	0	8	37	7	3	5	231	2	271	12
DIVISIONS														
New England	241	2	0	1	0	0	4	1	168	0	8	45	7	6
Mid Atlantic	636	4	93	0	0	0	45	14	57	4	3	386	16	15
East North Central	807	4	1	0	21	3	316	204	7	199	9	7	21	15
West North Central	268	1	0	1	0	25	124	13	0	0	30	0	20	54
South Atlantic	459	2	0	25	0	13	36	17	9	4	6	97	14	237
East South Central	229	0	0	75	0	11	5	5	0	1	0	2	0	129
West South Central	334	0	0	2	0	197	1	1	2	0	3	0	6	123
Mountain	149	4	0	0	0	6	18	2	2	4	54	2	53	4
Pacific	540	109	0	0	0	2	19	4	2	1	176	0	218	8
STATES														
Alabama	66	0	0	64	0	0	0	0	0	0	0	0	0	2
Alaska	4	0	0	0	0	0	0	1	0	0	3	0	0	0
Arizona	26	1	0	0	0	2	3	0	0	0	8	2	9	2
Arkansas	55	0	0	0	0	2	0	0	2	0	0	0	0	52
California	346	108	0	0	0	2	11	2	2	0	14	0	201	6
Colorado	24	0	0	0	0	2	6	0	0	0	6	0	10	0
Connecticut	49	0	0	1	0	0	3	1	24	0	0	16	2	2
Delaware	11	0	0	0	0	0	0	0	0	1	0	7	1	2
District of Columbia	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Florida	128	1	0	7	0	11	15	5	2	0	6	10	8	62
Georgia	48	0	0	4	0	0	1	2	0	0	0	0	1	40
Hawaii	23	1	0	0	0	0	4	1	0	1	8	0	6	2
Idaho	12	0	0	0	0	0	0	0	0	3	6	0	3	0
Illinois	190	0	0	0	0	0	176	12	0	0	0	0	2	0

Appendix Table 2A

NUMBER OF OPTOMETRY STUDENTS BY STATE OF PERMANENT RESIDENCE AND SCHOOL ATTENDED; 1975-1976
(All Students)

		School/College of Optometry												
Location	Total	Berkeley	State Univ. of New York	Alabama	Ferris	Houston	Illinois	Indiana	New England College of Optometry	Ohio	Pacific	Pennsylvania	Southern Calif. College of Optometry	Southern
Indiana	182	0	0	0	0	0	4	172	0	0	0	0	5	2
Iowa	70	0	0	0	0	0	48	3	0	0	6	0	3	8
Kansas	47	0	0	1	0	14	5	0	0	0	2	0	5	21
Kentucky	40	0	0	8	0	10	3	2	0	1	0	2	0	15
Louisiana	46	0	0	2	0	11	0	0	0	0	0	0	1	31
Maine	28	1	0	0	0	0	0	0	16	0	2	7	1	2
Maryland	71	0	0	1	0	0	8	1	5	1	0	38	2	15
Massachusetts	132	1	0	0	0	0	1	0	107	0	5	16	2	0
Michigan	133	1	1	0	21	2	74	7	2	5	3	5	7	6
Minnesota	43	1	0	0	0	0	26	3	0	0	11	0	2	0
Mississippi	37	0	0	1	0	2	0	3	0	0	0	0	0	31
Missouri	37	0	0	0	0	3	19	5	0	0	0	0	1	8
Montana	27	1	0	0	0	0	6	0	0	0	17	0	3	0
Nebraska	40	0	0	0	0	5	9	0	0	0	6	0	6	15
Nevada	9	0	0	0	0	0	0	0	2	0	3	0	5	0
New Hampshire	10	0	0	0	0	0	0	0	7	0	2	2	0	0
New Jersey	77	0	5	0	0	0	1	3	3	0	0	59	2	2
New Mexico	16	2	0	0	0	3	0	0	0	1	3	0	7	0
New York	300	4	87	0	0	0	28	7	48	0	3	100	13	10
North Carolina	78	1	0	5	0	2	0	3	0	0	0	17	0	50
North Dakota	17	0	0	0	0	0	10	0	0	0	5	0	2	0
Ohio	225	0	0	0	0	0	11	5	5	191	3	2	3	4
Oklahoma	66	0	0	0	0	19	1	0	0	0	3	0	3	40
Oregon	115	0	0	0	0	0	0	0	0	0	113	0	2	0
Pennsylvania	260	0	1	0	0	0	15	4	5	4	0	227	1	2
Rhode Island	15	0	0	0	0	0	0	0	10	0	0	3	1	0
South Carolina	33	0	0	4	0	0	1	1	0	0	0	0	0	27
South Dakota	14	0	0	0	0	3	6	1	0	0	2	0	0	2
Tennessee	86	0	0	2	0	0	3	0	0	0	0	0	0	81
Texas	167	0	0	0	0	165	0	1	0	0	0	0	1	0
Utah	14	0	0	0	0	0	3	0	0	0	0	0	9	2
Vermont	7	0	0	0	0	0	0	0	3	0	0	2	0	2
Virginia	54	0	0	5	0	0	5	3	2	0	0	17	1	21
Washington	52	0	0	0	0	0	4	0	0	0	39	0	9	0
West Virginia	35	0	0	0	0	0	5	1	0	1	0	7	0	21
Wisconsin	75	3	0	0	0	2	51	9	0	3	3	0	3	2
Wyoming	20	0	0	0	0	0	0	2	0	0	12	0	6	0
UNKNOWN	214	110	6	1	0	6	3	13	38	4	9	12	9	2

Source: Data - Survey of Students Enrolled in Schools/Colleges of Optometry, 1975-1976.

[1] Uninflated data - administratively obtained information only.

Appendix Table 2B

NUMBER OF OPTOMETRY STUDENTS BY STATE OF PERMANENT RESIDENCE AND SCHOOL ATTENDED: 1975-1976
(Survey Respondents Only)

Location	Total	School/College of Optometry											
		State Univ. of New York	Alabama	Ferris	Houston	Illinois	Indiana	New England College of Optometry	Ohio	Pacific	Pennsylvania	Southern Calif. College of Optometry	Southern
Total	2536	96	91	21	169	447	258	165	167	201	319	317	285
U. S. Total	2447	87	89	21	162	445	242	142	164	192	311	308	284
Non-U. S.	17	3	1	0	3	0	4	1	0	3	1	1	0
REGIONS													
Northeast	558	86	1	0	0	38	14	130	3	7	249	20	10
North Central	841	1	1	21	18	345	200	4	153	26	4	35	33
South	606	0	87	0	139	33	22	6	4	6	57	17	235
West	442	0	0	0	5	29	6	2	4	153	1	236	6
DIVISIONS													
New England	142	0	1	0	0	3	1	97	0	5	26	6	3
Mid Atlantic	416	86	0	0	0	35	13	33	3	2	223	14	7
East North Central	652	1	0	21	2	248	188	4	153	6	4	18	7
West North Central	189	0	1	0	16	97	12	0	0	20	0	17	26
South Atlantic	267	0	21	0	8	28	16	5	3	4	56	12	114
East South Central	144	0	64	0	7	4	5	0	1	0	1	0	62
West South Central	195	0	2	0	124	1	1	1	0	2	0	5	59
Mountain	109	0	0	0	4	14	2	1	3	36	1	46	2
Pacific	333	0	0	0	1	15	4	1	1	117	0	190	4
STATES													
Alabama	55	0	54	0	0	0	0	0	0	0	0	0	1
Alaska	3	0	0	0	0	0	1	0	0	2	0	0	0
Arizona	18	0	0	0	1	2	0	0	0	5	1	8	1
Arkansas	27	0	0	0	1	0	0	1	0	0	0	0	25
California	200	0	0	0	1	9	2	1	0	9	0	175	3
Colorado	19	0	0	0	1	5	0	0	0	4	0	9	0
Connecticut	30	0	1	0	0	2	1	14	0	0	9	2	1
Delaware	7	0	0	0	0	0	0	0	1	0	4	1	1
District of Columbia	0	0	0	0	0	0	0	0	0	0	0	0	0
Florida	78	0	6	0	7	12	5	1	0	4	6	7	30
Georgia	26	0	3	0	0	1	2	0	0	0	0	1	19
Hawaii	16	0	0	0	0	3	1	0	1	5	0	5	1
Idaho	9	0	0	0	0	0	0	0	2	4	0	3	0

Appendix Table 23

NUMBER OF OPTOMETRY STUDENTS BY STATE OF PERMANENT RESIDENCE AND SCHOOL ATTENDED: 1975-1976
(Survey Respondents Only)

Location	Total	School/College of Optometry											
		State Univ. of New York	Alabama	Ferris	Houston	Illinois	Indiana	New England College of Optometry	Ohio	Pacific	Pennsylvania	Southern Calif. College of Optometry	Southern
Illinois	151	0	0	0	0	138	11	0	0	0	0	2	0
Indiana	166	0	0	0	0	3	158	0	0	0	0	4	1
Iowa	52	0	0	0	0	38	3	0	0	[illegible]	0	3	4
Kansas	29	0	1	0	9	4	0	0	0	1	0	4	10
Kentucky	26	0	7	0	6	2	2	0	1	0	1	0	7
Louisiana	25	0	2	0	7	0	0	0	0	0	0	1	15
Maine	16	0	0	0	0	0	0	9	0	1	4	1	1
Maryland	43	0	1	0	0	6	1	3	1	0	22	2	7
Massachusetts	77	0	0	0	0	1	0	62	0	3	9	2	0
Michigan	106	1	0	21	1	58	6	1	4	2	3	6	3
Minnesota	32	0	0	0	0	20	3	0	0	7	0	2	0
Mississippi	20	0	1	0	1	0	3	0	0	0	0	0	15
Missouri	27	0	0	0	2	15	5	0	0	0	0	1	4
Montana	19	0	0	0	0	5	0	0	0	11	0	3	0
Nebraska	26	0	0	0	3	7	0	0	0	4	0	5	7
Nevada	7	0	0	0	0	0	0	1	0	2	0	4	0
New Hampshire	6	0	0	0	0	0	0	4	0	1	1	0	0
New Jersey	48	5	0	0	0	1	3	2	0	0	34	2	1
New Mexico	11	0	0	0	2	0	0	0	1	2	0	6	0
New York	212	80	0	0	0	22	6	28	0	2	58	11	5
North Carolina	42	0	4	0	1	0	3	0	0	0	10	0	24
North Dakota	13	0	0	0	0	8	0	0	0	3	0	2	0
Ohio	172	0	0	0	0	9	5	3	147	2	1	3	2
Oklahoma	37	0	0	0	12	1	0	0	0	2	0	3	19
Oregon	77	0	0	0	0	0	0	0	0	75	0	2	0
Pennsylvania	156	1	0	0	0	12	4	3	3	0	131	1	1
Rhode Island	9	0	0	0	0	0	0	6	0	0	2	1	0
South Carolina	18	0	3	0	0	1	1	0	0	0	0	0	13
South Dakota	10	0	0	0	2	5	1	0	0	1	0	0	1
Tennessee	43	0	2	0	0	2	0	0	0	0	0	0	39
Texas	106	0	0	0	104	0	1	0	0	0	0	1	0
Utah	11	0	0	0	0	2	0	0	0	0	0	8	1
Vermont	4	0	0	0	0	0	0	2	0	0	1	0	1
Virginia	33	0	4	0	0	4	3	1	0	0	10	1	10
Washington	37	0	0	0	0	3	0	0	0	26	0	8	0
West Virginia	20	0	0	0	0	4	1	0	1	0	4	0	10
Wisconsin	57	0	0	0	1	40	8	0	2	2	0	3	1
Wyoming	15	0	0	0	0	0	2	0	0	8	0	5	0
UNKNOWN	72	2	1	0	4	2	12	22	3	6	7	8	1

Source: Data - Survey of Students Enrolled in Schools/Colleges of Optometry, 1975-1976.

Appendix Table 3

NUMBER AND PERCENT OF OPTOMETRY STUDENTS BY TYPE OF COMMUNITY OF PERMANENT RESIDENCE AND INTENDED PRACTICE
1975-1976
(Survey Respondents Only)

Type of Community of Intended Practice	Type of Community of Permanent Residence									
	Number					Percent				
	Total	Rural	Suburban	Urban	Unknown	Total	Rural	Suburban	Urban	Unknown
Total, All Classes[1]	2536	695	989	787	65	100.0	100.0	100.0	100.0	100.0
Rural	585	369	109	92	15	23.1	53.1	11.0	11.7	23.1
Suburban	1119	168	678	251	22	44.1	24.2	68.6	31.9	33.8
Urban	440	41	77	311	11	17.4	5.9	7.8	39.5	16.9
Critical Shortage Area	49	21	13	15	0	1.9	3.0	1.3	1.9	0.0
More Than One Response	240	80	70	78	12	9.5	11.5	7.1	9.9	18.5
Don't Intend to Practice	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Other	1	0	0	1	0	a	0.0	0.0	0.1	0.0
Unknown	43	5	16	20	2	1.7	0.7	1.6	2.5	3.1
No Response	59	11	26	19	3	2.3	1.6	2.6	2.4	4.6
Total, First Year Class	854	238	342	256	18	100.0	100.0	100.0	100.0	100.0
Rural	199	120	44	33	2	23.3	50.4	12.9	12.9	11.1
Suburban	381	63	233	78	7	44.6	26.5	68.1	30.5	38.9
Urban	149	11	25	109	4	17.5	4.6	7.3	42.6	22.2
Critical Shortage Area	19	10	4	5	0	2.2	4.2	1.2	2.0	0.0
More Than One Response	66	29	19	14	4	7.7	12.2	5.6	5.5	22.2
Don't Intend to Practice	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Other	1	0	0	1	0	0.1	0.0	0.0	0.4	0.0
Unknown	13	3	3	7	0	1.5	1.3	0.9	2.7	0.0
No Response	26	2	14	9	1	3.0	0.8	4.1	3.5	5.6

Appendix Table 3

NUMBER AND PERCENT OF OPTOMETRY STUDENTS BY TYPE OF COMMUNITY OF PERMANENT RESIDENCE AND INTENDED PRACTICE: 1975-1976
(Survey Respondents Only)

Type of Community Of Intended Practice	Type of Community of Permanent Residence									
	Number					Percent				
	Total	Rural	Suburban	Urban	Unknown	Total	Rural	Suburban	Urban	Unknown
Total, Second Year Class	666	177	271	204	14	100.0	100.0	100.0	100.0	100.0
Rural	148	100	25	20	3	22.2	56.5	9.2	9.8	21.4
Suburban	290	37	185	63	5	43.5	20.9	68.3	30.9	35.7
Urban	110	7	23	77	3	16.5	4.0	8.5	37.7	21.4
Critical Shortage Area	15	4	7	4	0	2.3	2.3	2.6	2.0	0.0
More Than One Response	74	23	19	31	1	11.1	13.0	7.0	15.2	7.1
Don't Intend to Practice	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Other	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Unknown	15	1	7	6	1	2.3	0.6	2.6	2.9	7.1
No Response	14	5	5	3	1	2.1	2.8	1.8	1.5	7.1
Total, Third Year Class	583	146	236	182	19	100.0	100.0	100.0	100.0	100.0
Rural	116	72	20	19	5	19.9	49.3	8.5	10.4	26.3
Suburban	274	42	167	59	6	47.0	28.8	70.8	32.4	31.6
Urban	92	6	15	70	1	15.8	4.1	6.4	38.5	5.3
Critical Shortage Area	10	4	1	5	0	1.7	2.7	0.4	2.7	0.0
More Than One Response	69	19	24	20	6	11.8	13.0	10.2	11.0	31.6
Don't Intend to Practice	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Other	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Unknown	11	1	5	5	0	1.9	0.7	2.1	2.7	0.0
No Response	11	2	4	4	1	1.9	1.4	1.7	2.2	5.3

Appendix Table 3

NUMBER AND PERCENT OF OPTOMETRY STUDENTS BY TYPE OF COMMUNITY OF PERMANENT RESIDENCE AND INTENDED PRACTICE: 1975-1976
(Survey Respondents Only)

Type of Community Of Intended Practice	Type of Community of Permanent Residence									
	Number					Percent				
	Total	Rural	Suburban	Urban	Unknown	Total	Rural	Suburban	Urban	Unknown
Total, Fourth Year Class	427	134	135	144	14	100.0	100.0	100.0	100.0	100.0
Rural	121	77	19	20	5	28.3	57.5	14.1	13.9	35.7
Suburban	171	26	90	51	4	40.0	19.4	66.7	35.4	28.6
Urban	87	17	13	54	3	20.4	12.7	9.6	37.5	21.4
Critical Shortage Area	5	3	1	1	0	1.2	2.2	0.7	0.7	0.0
More Than One Response	31	9	8	13	1	7.3	6.7	5.9	9.0	7.1
Don't Intend to Practice	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Other	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Unknown	4	0	1	2	1	0.9	0.0	0.7	1.4	7.1
No Response	8	2	3	3	0	1.9	1.5	2.2	2.1	0.0

Source: Data - Survey of Students Enrolled in Schools/Colleges of Optometry, 1975-1976.

[1] Includes 6 students of unknown class
[a] Less than 0.05 percent

Appendix Table 4

NUMBER OF OPTOMETRY STUDENTS BY RACIAL/ETHNIC BACKGROUND AND SEX (All Students): 1975-1976

Racial/Ethnic Background	Total	Sex		
		Male	Female	Unknown
Total	3900	3426	460	14
White	3538	3165	367	6
Black	69	39	30	0
Chinese	52	37	15	0
Japanese	53	45	8	0
Other Asian	64	36	28	0
American Indian	5	3	2	0
Other	26	21	3	2
Mexican American	41	40	1	0
Puerto Rican	5	3	2	0
Other Latin American	5	5	0	0
Prefer Not To Respond	22	20	2	0
No Response	20	12	2	6

Source: Data - Survey of Students Enrolled in Schools/Colleges of Optometry, 1975-1976.

Appendix Table 5

NUMBER OF OPTOMETRY STUDENTS BY RACIAL/ETHNIC BACKGROUND, SEX AND SCHOOL ATTENDED; 1975-1976

School / Sex	Racial/Ethnic Background						
	Total	White[1]	Black	Asian[1]	Other[1]	Prefer Not To Respond	No Response
ALL SCHOOLS							
Total	3886[2]	3583	69	169	29	22	14
Male	3426	3213	39	118	24	20	12
Female	460	370	30	51	5	2	2
ALABAMA							
Total	107	99	7	1	-	-	-
Male	98	92	5	1	-	-	-
Female	9	7	2	-	-	-	-
BERKELEY							
Total	236	168	8	60	-	-	-
Male	174	135	5	34	-	-	-
Female	62	33	3	26	-	-	-
FERRIS							
Total	21	21	-	-	-	-	-
Male	17	17	-	-	-	-	-
Female	4	4	-	-	-	-	-
HOUSTON							
Total	264	245	2	11	3	2	3
Male	231	216	-	8	3	2	3
Female	33	29	2	3	-	-	-
ILLINOIS							
Total	570	548	6	12	4	3	-
Male	504	489	3	8	3	3	-
Female	66	59	3	4	1	-	-
INDIANA							
Total	276	248	19	3	3	2	-
Male	223	207	9	1	3	2	-
Female	53	41	10	2	-	-	-
NEW ENGLAND							
Total	284	268	9	3	2	-	2
Male	230	218	9	-	2	-	2
Female	54	50	-	3	-	-	-

Appendix Table 5

NUMBER OF OPTOMETRY STUDENTS BY RACIAL/ETHNIC BACKGROUND, SEX AND SCHOOL ATTENDED: 1975-1976

School / Sex	Racial/Ethnic Background						
	Total	White	Black	Asian	Other	Prefer Not To Respond	No Response
OHIO							
Total	217	212	1	2	1	-	-
Male	196	194	-	1	1	-	-
Female	21	18	1	1	-	-	-
PACIFIC							
Total	302	273	-	18	4	5	4
Male	276	253	-	15	2	5	2
Female	26	20	-	3	2	-	2
PENNSYLVANIA							
Total	551	517	14	5	9	3	2
Male	492	467	9	3	7	3	2
Female	59	50	5	2	2	-	-
SOUTHERN							
Total	592	580	-	6	-	2	4
Male	559	549	-	4	-	2	4
Female	33	31	-	2	-	-	-
SCCO							
Total	363	314	-	41	3	3	-
Male	341	296	-	38	3	3	-
Female	22	18	-	3	-	-	-
SUNY							
Total	104	91	5	5	-	2	-
Male	87	81	1	4	-	-	-
Female	17	10	4	1	-	2	-

Source: Data - Survey of Students Enrolled in Schools/Colleges of Optometry, 1975-1976.

[1] White includes Mexican American (41 students), Puerto Rican (5 students), and Other Latin American (5 students). Asian includes Chinese (52 students), Japanese (53 students), and Other Asian (64 students). Other includes American Indian (5 students) and Other (26 students).

[2] 14 students did not report sex, 6 of whom were white, 2 other, and 6 of unknown racial/ethnic background.

Appendix Table 6

NUMBER OF OPTOMETRY STUDENTS BY RACIAL/ETHNIC BACKGROUND, SEX AND CLASS: 1975-1976

(Survey Respondents Only)

Class / Sex	Racial/Ethnic Background						
	Total	White[1]	Black	Asian[1]	Other[1]	Prefer Not To Respond	No Response
Total[2]	2536[2]	2356	47	83	21	16	13
Male	2243	2115	25	65	17	14	7
Female	283	237	22	18	3	2	1
Unknown	10	4	0	0	1	0	5
First Year							
Total	851	786	19	28	6	8	4
Male	746	704	9	19	4	7	3
Female	105	82	10	9	2	1	1
Second Year							
Total	665	615	11	26	7	4	2
Male	588	546	6	23	7	4	2
Female	77	69	5	3	0	0	0
Third Year							
Total	580	547	11	16	3	2	1
Male	514	489	8	13	2	1	1
Female	66	58	3	3	1	1	0
Fourth Year							
Total	423	398	6	13	4	2	0
Male	389	371	2	10	4	2	0
Female	34	27	4	3	0	0	0

Source: Data - Survey of Students Enrolled in Schools/Colleges of Optometry: 1975-1976.

[1]White includes Mexican American (41) Students), Puerto Rican (5 students), and Other Latin American (5 students). Asian includes Chinese (52 students), Japanese 53 students), and Other Asian (64 students). Other includes American Indian (5 students) and Other (26 students).

[2] Includes six students for whom class is unknown.

Appendix Table 7

NUMBER OF OPTOMETRY STUDENTS BY RACIAL/ETHNIC BACKGROUND AND STATE/REGION OF PERMANENT RESIDENCE: 1975-1976
(All Students)

State of Permanent Residence	Racial/Ethnic Background						
	Total	White[1]	Black	Asian[2]	Other[3]	Prefer Not To Respond	No Response
Total	3900	3588	69	169	30	22	20
U.S. Total	3876	3577	69	159	29	22	20
Non-U.S.	22	11	0	10	1	0	0
REGIONS							
Northeast	925	822	23	13	10	4	52
North Central	1100	1040	15	6	7	5	27
South	1046	973	20	13	3	7	29
West	804	566	9	97	8	7	117
DIVISIONS							
New England	251	228	3	3	3	0	13
Mid Atlantic	674	594	20	10	7	4	39
East North Central	827	777	13	5	6	5	20
West North Central	273	262	1	1	1	0	7
South Atlantic	472	441	10	1	0	5	15
East South Central	231	214	9	5	0	0	2
West South Central	343	318	2	7	3	2	12
Mountain	157	143	3	2	0	1	8
Pacific	647	423	7	95	8	6	109
STATES							
Alabama	66	63	1	1	0	0	0
Alaska	4	4	0	0	0	0	0
Arizona	26	23	0	1	0	1	0
Arkansas	55	55	0	0	0	0	0
California	346	266	7	71	1	1	0
Colorado	24	24	0	0	0	0	0
Connecticut	49	49	0	0	0	0	0
Delaware	11	11	0	0	0	0	0
District of Columbia	0	0	0	0	0	0	0
Florida	128	124	1	0	0	3	0
Georgia	48	44	3	0	0	0	0
Hawaii	23	2	0	18	2	0	0
Idaho	12	12	0	0	0	0	0
Illinois	190	179	4	5	1	1	0

Appendix Table 7

NUMBER OF OPTOMETRY STUDENTS BY RACIAL/ETHNIC BACKGROUND AND STATE/REGION OF PERMANENT RESIDENCE: 1975-1976
(All Students)

State of Permanent Residence	Racial/Ethnic Background						
	Total	White	Black	Asian	Other	Prefer Not To Respond	No Response
Indiana	182	173	4	0	2	2	0
Iowa	70	70	0	0	0	0	0
Kansas	47	44	0	1	0	0	2
Kentucky	40	37	3	0	0	0	0
Louisiana	46	44	0	2	0	0	0
Maine	29	27	0	0	0	0	2
Maryland	71	70	0	1	0	0	0
Massachusetts	130	120	3	3	3	0	2
Michigan	133	130	2	0	0	1	0
Minnesota	43	43	0	0	0	0	0
Mississippi	37	33	4	0	0	0	0
Missouri	37	36	1	0	0	0	0
Montana	27	27	0	0	0	0	0
Nebraska	40	39	0	0	1	0	0
Nevada	9	8	2	0	0	0	0
New Hampshire	10	10	0	0	0	0	0
New Jersey	77	74	2	1	0	0	0
New Mexico	16	14	1	1	0	0	0
New York	300	273	16	5	2	2	2
North Carolina	78	77	1	0	0	0	0
North Dakota	17	17	0	0	0	0	0
Ohio	225	221	3	0	1	0	0
Oklahoma	66	65	0	0	2	0	0
Oregon	116	108	0	0	3	3	2
Pennsylvania	260	248	2	3	5	2	0
Rhode Island	15	15	0	0	0	0	0
South Carolina	33	31	0	0	0	2	0
South Dakota	14	14	0	0	0	0	0
Tennessee	86	82	0	4	0	0	0
Texas	167	154	2	5	2	2	3
Utah	14	14	0	0	0	0	0
Vermont	7	7	0	0	0	0	0
Virginia	54	50	4	0	0	0	0
Washington	52	44	0	6	2	2	0
West Virginia	35	33	0	0	0	0	2
Wisconsin	75	74	0	0	1	0	0
Wyoming	20	20	0	0	0	0	0
UNKNOWN	214	176	2	29	0	0	6

Source: Data - Survey of Students Enrolled in Schools/Colleges of Optometry, 1975-1976.

[1]White includes 41 Mexican-American students distributed as follows: California (9), Colorado (1), Illinois (1), Indiana (1), New Mexico (1), Texas (16), Wisconsin (2), State unknown (10). White also includes 5 Puerto Rican students from New Jersey (2), Texas (2), Puerto Rico (1), and 5 Other Latin American students from California (2), Florida (1), and Illinois (2).

[2]Asian includes Chinese (52), Japanese (53), and Other Asian (64) students.

[3]Other includes 5 American Indian students from Oklahoma (1), Oregon (2), & Texas (2).

Appendix Table 8A

NUMBER OF OPTOMETRY STUDENTS BY PARENTS' INCOME, SCHOOL AND CLASS: 1975-1976
(Survey Respondents Only)

School and Class	Parents' Income (in dollars)									
	Total	< 5000	5000 9999	10,000 14,999	15,000 19,999	20,000 29,999	> 30,000	Prefer Not To Respond	Do Not Know	Not Applicable
Total	2479	92	244	468	417	396	329	223	308	2
All Schools										
First Year	844	32	89	158	147	142	114	53	108	1
Second Year	656	22	61	129	111	94	99	72	68	1
Third Year	564	23	62	102	79	100	61	53	84	0
Fourth Year	414	15	32	79	80	60	55	45	48	0
All Classes										
Alabama	89	3	9	20	21	12	11	6	7	0
Ferris	21	0	2	5	4	5	2	1	2	0
Houston	166	8	15	21	24	20	26	16	35	1
Illinois	437	12	42	86	63	77	62	38	57	0
Indiana	252	14	22	48	44	49	31	15	29	0
New England	160	9	21	27	18	28	16	18	23	0
Ohio	165	1	10	38	49	18	17	14	18	0
Pacific	195	9	23	50	27	31	23	15	17	0
Pennsylvania	315	10	27	50	49	54	43	45	37	0
Southern	279	9	27	55	49	41	47	21	29	1
SCCO	311	9	31	53	54	47	49	25	43	0
SUNY	94	8	15	16	17	14	3	10	11	0

Source: Data - Survey of Students Enrolled in Schools/Colleges of Optometry, 1975-1976.

Appendix Table 8 B

PERCENT DISTRIBUTION OF OPTOMETRY STUDENTS BY PARENTS' INCOME, SCHOOL AND CLASS: 1975-1976
(Survey Respondents Only)

School and Class	Parents' Income (in dollars)									
	Total	< 5000	5000 9999	10,000 14,999	15,000 19,999	20,000 29,999	> 30,000	Prefer Not To Respond	Do Not Know	Not Applicable
Total	100.0	3.7	9.8	18.9	16.8	16.0	13.3	9.0	12.4	0.1
All Schools										
First Year	100.0	3.8	10.5	18.7	17.4	16.8	13.5	6.3	12.8	0.1
Second Year	100.0	3.4	9.3	19.7	16.9	14.3	15.1	11.0	10.4	0.2
Third Year	100.0	4.1	11.0	18.1	14.0	17.7	10.8	9.4	14.9	0.0
Fourth Year	100.0	3.6	7.7	19.1	19.3	14.5	13.3	10.9	11.6	0.0
All Classes										
Alabama	100.0	3.4	10.1	22.5	23.6	13.5	12.4	6.7	7.9	0.0
Ferris	100.0	0.0	9.5	23.8	19.1	23.8	9.5	4.8	9.5	0.0
Houston	100.0	4.8	9.0	12.7	14.5	12.1	15.7	9,6	21.1	0.6
Illinois	100.0	2.8	9.6	19.7	14.4	17.6	14.2	8.7	13.0	0.0
Indiana	100.0	5.6	8.7	19.1	17.5	19.4	12.3	6.0	11.5	0.0
New England	100.0	5.6	13.1	16.9	11.3	17.5	10.0	11.3	14.4	0.0
Ohio	100.0	0.6	6.1	23.0	29.7	10.9	10.3	8.5	10.9	0.0
Pacific	100.0	4.6	11.8	25.6	13.9	15.9	11.8	7.7	8.7	0.0
Pennsylvania	100.0	3.2	8.6	15.9	15.6	17.1	13.7	14.3	11.8	0.0
Southern	100.0	3.2	9.7	19.7	17.6	14.7	16.9	7.5	10.4	0.4
SCCO	100.0	2.9	10.0	17.0	17.4	15.1	15.8	8.0	13.8	0.0
SUNY	100.0	8.5	16.0	17.0	18.1	14.9	3.2	10.6	11.7	0.0

Source: Data - Survey of Students Enrolled in Schools/Colleges of Optometry, 1975-1976.

Appendix Table 9

NUMBER OF OPTOMETRY STUDENTS BY PARENTS' EDUCATION AND CLASS: 1975-1976
(Survey Respondents Only)

Parents' Education	Total	Class			
		First Year	Second Year	Third Year	Fourth Year
Total	2470	829	649	573	419
Neither high school graduate	140	43	34	36	27
Both high school graduate	475	141	133	117	84
Both college	377	130	101	92	54
Both graduate/professional school	122	41	41	19	21
Both vocational/technical school	1	1	-	-	-
Both unknown	-	-	-	-	-
Both "no response"	20	4	7	6	3
Father not high school graduate and					
Mother: high school graduate	143	48	41	34	20
college	41	15	4	13	9
graduate/professional	11	3	3	5	-
vocational/technical	1	-	1	-	-
unknown	-	-	-	-	-
no response	-	-	-	-	-
Father high school graduate and					
Mother: not high school graduate	74	22	16	16	20
college	125	43	39	27	16
graduate/professional	27	11	7	4	5
vocational/technical	-	-	-	-	-
unknown	1	-	-	1	-
no response	1	-	-	-	1
Father college and					
Mother: not high school graduate	28	12	8	7	1
high school graduate	334	121	81	80	52
graduate/professional	62	24	15	14	9
vocational/technical	5	4	-	1	-
unknown	-	-	-	-	-
no response	2	-	2	-	-
Father graduate/professional and					
Mother: not high school graduate	17	4	6	-	7
high school graduate	148	47	40	30	31
college	302	106	69	68	59
vocational/technical	5	4	1	-	-
unknown	-	-	-	-	-
no response	-	-	-	-	-
Father vocational/technical and					
Mother: not high school graduate	-	-	-	-	-
high school graduate	2	1	-	1	-
college	2	1	-	1	-
graduate /professional	-	-	-	-	-
unknown	-	-	-	-	-
no response	-	-	-	-	-

Appendix Table 9

NUMBER OF OPTOMETRY STUDENTS BY PARENTS' EDUCATION AND CLASS: 1975-1976
(Survey Respondents Only)

Parents' Education	Total	Class			
		First Year	Second Year	Third Year	Fourth Year
Father unknown and					
Mother: not high school graduate	-	-	-	-	-
high school graduate	-	-	-	-	-
college	-	-	-	-	-
graduate/professional	1	1	-	-	-
vocational/technical	-	-	-	-	-
no response	-	-	-	-	-
Father "no response" and					
Mother: not high school graduate	-	-	-	-	-
high school graduate	2	1	-	1	-
college	1	1	-	-	-
graduate/professional	-	-	-	-	-
vocational/technical	-	-	-	-	-
unknown	-	-	-	-	-

Source: Data - Survey of Students Enrolled in Schools/Colleges of Optometry, 1975-1976.

Appendix Table 10

NUMBER OF OPTOMETRY STUDENTS BY SCHOOL ATTENDED AND PARENTS' EDUCATION: 1975-1976

Parents' Education		School Attended												
		Total	Alabama	Ferris	Houston	Illinois	Indiana	New England	Ohio	Pacific	Pennsylvania	Southern	SCCO	SUNY
Total		2476	91	20	169	433	252	161	165	195	309	281	308	92
Neither High School Graduate		140	5	1	12	22	17	9	8	8	22	19	9	8
Both High School Graduate		477	12	2	27	69	61	34	41	44	76	42	47	22
Both College		377	14	2	27	62	29	30	18	31	40	46	63	15
Both Graduate/Professional School		123	5	1	8	18	18	9	4	6	15	17	17	5
Both Vocational/Technical School		1	-	-	-	-	-	-	-	-	-	1	-	-
Both unknown		-	-	-	-	-	-	-	-	-	-	-	-	-
Both "no response"		20	1	-	1	3	2	2	-	5	2	1	2	1
Father not High School Graduate and Mother:	High School Graduate	144	7	3	10	22	13	9	5	17	22	19	14	3
	College	41	2	1	1	10	1	-	1	3	3	9	6	4
	Graduate/Professional	11	1	1	-	6	-	-	-	1	-	1	1	-
	Vocational/Technical	1	1	-	-	-	-	-	-	-	-	-	-	-
	Unknown	-	-	-	-	-	-	-	-	-	-	-	-	-
	No Response	-	-	-	-	-	-	-	-	-	-	-	-	-
Father High School Graduate and Mother:	Not High School Graduate	74	3	-	7	13	8	3	3	7	6	6	10	4
	College	125	3	-	7	29	19	4	11	11	6	16	16	3
	Graduate/Professional	27	-	1	3	1	4	3	3	3	3	3	2	1
	Vocational/Technical	-	-	-	-	-	-	-	-	-	-	-	-	-
	Unknown	1	-	-	-	-	-	-	-	-	-	1	-	-
	No Response	1	-	-	-	-	-	-	-	-	-	-	-	1
Father College and Mother:	Not High School Graduate	29	1	-	1	2	2	3	2	3	7	3	3	2
	High School Graduate	335	13	5	15	61	32	19	31	20	48	36	43	12
	Graduate/Professional	62	2	2	5	8	5	5	10	4	6	6	8	1
	Vocational/Technical	5	2	-	1	-	-	-	-	-	-	2	-	-
	Unknown	-	-	-	-	-	-	-	-	-	-	-	-	-
	No Response	2	-	-	-	-	-	-	-	-	-	-	2	-
Father Graduate/Professional and Mother:	Not High School Graduate	17	-	-	-	5	-	1	2	2	1	-	5	1
	High School Graduate	148	4	-	13	30	15	12	8	6	25	14	17	4
	College	302	12	-	30	70	26	17	14	23	27	35	43	5
	Vocational/Technical	5	1	-	1	-	-	-	-	-	-	3	-	-
	Unknown	-	-	-	-	-	-	-	-	-	-	-	-	-
	No Response	-	-	-	-	-	-	-	-	-	-	-	-	-
Father Vocational/Technical and Mother:	Not High School Graduate	-	-	-	-	-	-	-	-	-	-	-	-	-
	High School Graduate	2	-	1	-	-	-	-	1	-	-	-	-	-
	College	2	-	-	-	-	-	-	1	-	-	1	-	-
	Graduate/Professional	-	-	-	-	-	-	-	-	-	-	-	-	-
	Unknown	-	-	-	-	-	-	-	-	-	-	-	-	-
	No Response	-	-	-	-	-	-	-	-	-	-	-	-	-
Father Unknown and Mother:	Not High School Graduate	-	-	-	-	-	-	-	-	-	-	-	-	-
	High School Graduate	-	-	-	-	-	-	-	-	-	-	-	-	-
	College	-	-	-	-	-	-	-	-	-	-	-	-	-
	Graduate/Professional	1	-	-	-	-	-	-	-	1	-	-	-	-
	Vocational/Technical	-	-	-	-	-	-	-	-	-	-	-	-	-
	No Response	-	-	-	-	-	-	-	-	-	-	-	-	-
Father "No Response" and Mother:	Not High School Graduate	-	-	-	-	-	-	-	-	-	-	-	-	-
	High School Graduate	-	-	-	-	1	-	1	-	-	-	-	-	-
	College	-	-	-	-	1	-	-	-	-	-	-	-	-
	Graduate/Professional	-	-	-	-	-	-	-	-	-	-	-	-	-
	Vocational/Technical	-	-	-	-	-	-	-	-	-	-	-	-	-
	Unknown	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Data - Survey of Students Enrolled in Schools/Colleges of Optometry, 1975-1976

Appendix Table 11

NUMBER OF OPTOMETRY STUDENTS BY ASSETS AVAILABLE, SCHOOL AND CLASS: 1975-1976
(Survey Respondents Only)

School and Class	Assets Available (in dollars)[1]									
	Total	0 199	200 499	500 999	1000 1999	2000 2999	3000 9999	10,000 & Over	Prefer Not To Respond	Do Not Know
Total	2493	388	300	293	314	228	263	100	140	265
All Schools										
First Year	843	146	91	86	109	92	109	46	41	123
Second Year	639	169	73	81	80	37	62	29	41	67
Third Year	573	150	71	70	73	32	60	13	33	49
Fourth Year	418	123	65	36	52	27	34	10	23	24
All Classes										
Alabama	89	24	13	15	9	5	7	1	4	11
Ferris	21	4	4	2	5	3	2	1	0	0
Houston	166	35	17	25	19	14	18	5	10	23
Illinois	442	97	51	47	65	34	39	15	21	33
Indiana	236	36	35	30	23	20	26	3	8	25
New England	160	42	24	19	19	11	12	6	12	15
Ohio	165	23	20	28	32	18	20	3	7	14
Pacific	197	45	25	28	28	17	21	9	7	17
Pennsylvania	316	73	41	27	32	28	34	17	23	41
Southern	280	66	30	32	37	18	33	21	17	26
SCCO	308	73	35	33	28	32	41	13	19	32
SUNY	93	20	5	7	17	8	12	4	12	8
Alabama										
First Year	37	9	6	6	5	5	3	0	1	2
Second Year	17	6	3	4	1	0	1	0	1	1
Third Year	18	5	3	4	2	0	2	0	0	2
Fourth Year	17	4	1	1	1	0	1	1	2	6
Ferris										
First Year[2]	21	4	4	2	5	3	2	1	0	0
Houston										
First Year	43	9	5	7	3	5	5	2	1	5
Second Year	42	7	3	6	5	4	4	2	3	8
Third Year	37	8	4	5	5	1	7	1	2	4
Fourth Year	42	11	5	7	6	4	2	0	4	3
Illinois										
First Year	126	17	12	13	18	12	8	8	9	29
Second Year	121	32	12	10	19	16	11	1	8	12
Third Year	110	19	14	12	17	19	13	5	1	8
Fourth Year	85	29	13	12	11	7	5	1	3	4
Indiana										
First Year	62	12	6	9	10	7	9	0	2	7
Second Year	62	24	10	5	3	3	4	2	2	9
Third Year	42	25	7	5	4	7	6	0	1	7
Fourth Year	70	25	12	11	6	3	7	1	3	2
New England										
First Year	70	16	11	5	10	7	7	3	3	8
Second Year	20	4	4	4	1	1	2	2	1	1
Third Year	31	16	6	5	3	2	2	0	7	5
Fourth Year	19	6	3	5	0	1	1	1	1	1
Ohio										
First Year	30	0	3	5	6	7	5	0	0	4
Second Year	55	11	6	11	7	4	7	2	1	6
Third Year	43	8	3	8	9	5	3	0	5	2
Fourth Year	37	4	8	4	10	2	5	1	1	2
Pacific										
First Year	70	11	6	6	8	8	11	4	5	11
Second Year	56	13	9	9	10	5	4	1	1	4
Third Year	39	14	4	7	7	3	2	1	0	1
Fourth Year	32	7	6	6	3	1	4	3	1	1
Pennsylvania										
First Year	131	23	20	8	8	13	15	7	4	31
Second Year	113	31	13	14	13	9	11	7	13	4
Third Year	54	16	5	4	6	5	7	2	4	3
Fourth Year	16	3	3	1	5	1	1	1	0	1
Southern										
First Year	122	24	10	12	13	9	20	13	7	14
Second Year	54	9	4	8	13	2	5	4	2	7
Third Year	68	20	9	10	7	4	5	4	5	4
Fourth Year	36	13	7	2	4	3	3	0	3	1
SCCO										
First Year	92	16	7	9	15	11	17	5	3	9
Second Year	96	25	7	10	5	12	11	4	6	12
Third Year	74	17	14	9	4	5	9	2	6	8
Fourth Year	46	14	7	5	4	4	4	1	4	3
SUNY										
First Year	39	5	1	4	8	5	7	3	4	2
Second Year	21	6	2	0	3	1	2	1	3	3
Third Year	17	2	2	1	4	1	2	0	2	3
Fourth Year	16	7	0	2	2	1	1	0	3	0

Source: Data - Survey of Students Enrolled in Schools/Colleges of Optometry, 1975-1976.

[1]Assets available are students' estimates for financing the remainder of their optometric education excluding loans, scholarships and anticipated earnings.
[2]Only First Year data available. College opened Fall, 1975.

NUMBER OF OPTOMETRY STUDENTS BY EXPECTED COSTS, SCHOOL AND CLASS: 1975-1976
(Survey Respondents Only)

School and Class	Expected Costs (in dollars)[1]									
	Total	5000 9999	10000 15999	16000 19999	20000 24999	25000 29999	30000 34999	Over 40000	Do Not Know	No Response
Total	2329	38	204	297	391	608	408	304	34	25
All Schools										
First Year	854	13	61	89	186	225	148	94	31	7
Second Year	663	3	53	71	169	160	114	80	9	4
Third Year	583	12	31	71	132	143	74	81	9	10
Fourth Year	427	8	39	66	104	80	72	49	5	4
All Classes										
Alabama	90	1	6	18	20	17	15	10	2	1
Ferris	21	0	3	11	7	0	0	0	0	0
Houston	169	14	39	32	26	28	12	9	7	2
Illinois	447	1	8	30	123	139	80	62	1	3
Indiana	258	7	30	60	74	33	17	9	7	1
New England	162	2	4	10	46	60	19	12	4	5
Ohio	167	6	61	38	23	13	13	6	4	1
Pacific	200	1	2	19	54	48	47	21	3	3
Pennsylvania	319	0	5	24	75	108	57	39	9	2
Southern	284	0	2	11	34	63	84	84	4	2
SCCO	317	2	7	23	81	85	58	49	9	1
SUNY	95	4	17	19	28	12	6	3	4	2
Alabama										
First Year	37	0	3	8	7	9	4	5	1	0
Second Year	17	0	1	4	6	2	2	1	0	1
Third Year	19	1	1	4	3	3	4	2	1	0
Fourth Year	17	0	1	2	4	3	5	2	0	0
Ferris										
First Year[2]	21	0	3	11	7	0	0	0	0	0
Houston										
First Year	46	6	9	5	8	7	4	3	3	1
Second Year	42	1	13	9	7	6	3	2	1	0
Third Year	38	3	11	9	4	5	3	1	1	0
Fourth Year	43	4	6	9	7	10	2	2	2	1
Illinois										
First Year	128	0	4	6	33	47	24	12	1	1
Second Year	122	0	2	8	36	39	23	14	0	0
Third Year	110	0	0	8	25	40	14	21	0	2
Fourth Year	87	1	2	8	29	13	19	15	0	0
Indiana										
First Year	62	2	11	19	12	11	2	2	3	0
Second Year	64	0	11	13	25	7	4	0	2	0
Third Year	62	2	13	11	19	6	3	4	2	0
Fourth Year	70	3	12	15	18	9	8	3	0	1
New England										
First Year	71	2	1	6	27	22	9	3	1	0
Second Year	21	0	0	1	4	8	2	5	0	1
Third Year	51	0	2	2	12	19	7	3	2	4
Fourth Year	19	0	1	1	3	11	1	1	1	0
Ohio										
First Year	30	2	15	4	2	2	1	1	0	1
Second Year	55	3	20	12	8	2	7	1	2	0
Third Year	44	1	13	7	9	5	1	4	2	0
Fourth Year	38	0	11	13	4	4	4	0	0	0
Pacific										
First Year	70	0	2	4	22	16	15	7	2	2
Second Year	56	1	0	5	14	15	17	2	1	1
Third Year	40	0	0	7	12	10	5	5	0	1
Fourth Year	34	0	0	3	6	7	10	7	0	1
Pennsylvania										
First Year	132	0	1	10	27	46	25	13	9	1
Second Year	115	0	1	8	32	41	21	13	0	0
Third Year	53	0	2	6	12	18	7	9	0	1
Fourth Year	16	0	1	0	4	3	4	4	0	0
Southern										
First Year	124	0	1	1	5	27	47	39	4	0
Second Year	54	0	0	2	2	13	16	21	0	0
Third Year	69	0	0	4	14	16	15	18	0	2
Fourth Year	37	0	1	4	13	7	6	6	0	0
SCCO										
First Year	94	0	3	7	22	33	13	9	4	1
Second Year	97	0	0	4	29	25	18	19	2	0
Third Year	76	2	3	7	19	18	14	12	1	0
Fourth Year	50	0	1	7	11	9	11	9	2	0
SUNY										
First Year	39	1	8	6	14	5	2	0	3	0
Second Year	21	0	5	3	6	2	1	2	1	1
Third Year	19	3	2	6	3	3	1	1	0	0
Fourth Year	16	0	2	4	5	2	2	0	0	1

Source: Data - Survey of Students Enrolled in Schools/Colleges of Optometry, 1975-1976.

[1]Expected Costs are students' estimates for financing four years of optometric education including reasonable living costs, transportation, tuition, supplies, etc.

[2]Only First Year data available. College opened Fall, 1975.

Appendix Table 13

NUMBER OF OPTOMETRY STUDENTS BY EXPECTED INDEBTEDNESS, SCHOOL AND CLASS: 1975-1976
(Survey Respondents Only)

School and Class	Expected Indebtedness (in dollars)[1]									
	Total	0	1 2999	3000 5999	6000 7999	8000 9999	10000 11999	Over 12000	Prefer Not To Respond	Do Not Know
Total	2511	403	177	233	196	209	352	670	57	214
All Schools										
First Year	847	114	33	53	48	67	124	284	17	127
Second Year	662	96	48	58	39	51	95	189	15	51
Third Year	580	94	54	67	51	47	83	141	14	29
Fourth Year	422	99	42	55	38	44	50	76	11	7
All Classes										
Alabama	89	10	3	13	10	10	13	23	2	5
Ferris	21	1	1	5	4	4	0	1	0	5
Houston	166	48	16	25	15	10	11	10	7	24
Illinois	444	57	32	32	27	32	70	137	6	31
Indiana	256	45	26	39	27	20	33	59	3	24
New England	162	24	11	14	10	14	33	38	5	13
Ohio	165	43	31	34	19	18	5	6	5	14
Pacific	198	30	18	24	22	20	29	46	1	8
Pennsylvania	318	45	8	13	16	23	42	121	11	39
Southern	280	45	12	12	9	18	42	114	5	23
SCCO	317	42	15	19	26	22	63	101	8	21
SUNY	95	13	4	13	11	18	11	14	4	7
Alabama										
First Year	37	2	1	7	3	5	6	11	0	2
Second Year	17	0	2	1	1	1	4	7	0	1
Third Year	18	4	0	3	3	1	2	4	0	1
Fourth Year	17	4	0	2	3	3	1	1	2	1
Ferris										
First Year[2]	21	1	1	5	4	4	0	1	0	5
Houston										
First Year	44	13	3	1	6	1	2	4	3	11
Second Year	42	12	4	9	2	1	4	1	1	8
Third Year	38	11	4	9	3	3	2	2	0	4
Fourth Year	42	12	5	6	4	5	3	3	3	1
Illinois										
First Year	127	16	4	3	8	5	21	50	3	17
Second Year	122	10	10	10	8	10	19	44	3	8
Third Year	110	15	12	12	7	6	18	36	0	4
Fourth Year	85	16	6	7	4	11	12	27	0	2
Indiana										
First Year	62	9	4	7	4	8	8	6	1	15
Second Year	63	11	6	8	7	4	11	10	0	6
Third Year	61	10	8	9	7	1	10	15	1	0
Fourth Year	70	15	8	15	9	7	4	8	1	3
New England										
First Year	71	9	1	6	3	9	14	21	1	7
Second Year	21	5	0	2	3	1	4	4	0	2
Third Year	51	5	10	5	2	3	8	10	4	4
Fourth Year	19	5	0	1	2	1	7	3	0	0
Ohio										
First Year	30	13	5	2	5	1	0	0	0	4
Second Year	54	11	9	12	3	7	3	0	0	7
Third Year	43	13	8	1	4	6	1	3	4	3
Fourth Year	38	6	9	9	5	4	1	3	1	0
Pacific										
First Year	70	9	4	8	2	10	10	19	1	7
Second Year	56	6	7	5	9	2	11	15	0	1
Third Year	40	5	3	6	10	5	5	6	0	0
Fourth Year	32	10	4	5	1	3	3	6	0	0
Pennsylvania										
First Year	131	12	2	4	2	6	20	52	4	29
Second Year	116	19	4	3	11	9	14	44	5	7
Third Year	55	9	1	4	3	7	7	19	2	3
Fourth Year	16	5	1	2	0	1	1	6	0	0
Southern										
First Year	121	16	0	2	3	7	17	39	1	16
Second Year	53	8	3	2	0	2	8	23	1	6
Third Year	69	9	4	6	4	7	12	24	2	1
Fourth Year	37	12	5	2	2	2	5	8	1	0
SCCO										
First Year	94	10	6	4	5	3	19	36	1	10
Second Year	97	12	3	4	9	8	17	37	4	3
Third Year	74	10	3	8	4	5	16	19	1	8
Fourth Year	50	10	3	3	6	6	11	9	2	0
SUNY										
First Year	39	4	2	4	3	8	7	5	2	4
Second Year	21	2	0	2	4	4	0	4	1	2
Third Year	19	3	1	4	2	3	2	3	0	1
Fourth Year	16	4	1	3	2	1	2	2	1	0

Source: Data - Survey of Students Enrolled in Schools/Colleges of Optometry, 1975-1976.

[1]Expected Indebtedness is the students' anticipated total debt at the time of graduation.

[2]Only First Year data available. College opened Fall, 1975.

Appendix Table 14

OPTOMETRY STUDENTS' RESOURCES FOR FINANCING OPTOMETRIC EDUCATION BY RANK ORDER AND AVERAGE PERCENT SUPPORT BY CLASS; 1975-1976
(Survey Respondents Only)

Source	All Classes[1]				First Year Class				Second Year Class				Third Year Class				Fourth Year Class			
	Rank	Number of Students	Percent of Students (N=2510)	Average[2] Percent Support Provided	Rank	Number of Students	Percent of Students (N=842)	Average Percent Support Provided	Rank	Number of Students	Percent of Students (N=663)	Average Percent Support Provided	Rank	Number of Students	Percent of Students (N=580)	Average Percent Support Provided	Rank	Number of Students	Percent of Students (N=420)	Average Percent Support Provided
Summer Employment	1	1631	65.0	17.5	1	584	69.4	17.9	1	436	65.8	18.3	1	368	63.5	16.7	2	239	56.9	16.6
Parents & Other Relatives	2	1582	63.0	46.8	2	577	68.5	49.9	2	391	59.0	47.9	2	356	61.4	42.9	1	254	60.5	43.4
Federal Guaranteed Student Loan	3	1014	40.4	31.6	3	352	41.8	33.7	3	276	41.6	33.3	5	227	39.1	30.5	6	158	37.6	25.3
Spouse	4	910	36.3	43.6	5	230	27.3	39.8	4	239	36.1	46.0	4	230	39.7	46.6	3	210	50.0	41.5
Self (not work study)	5	890	35.5	18.5	4	268	31.8	20.5	6	230	34.7	19.6	6	212	36.6	17.5	5	179	42.6	15.7
Health Professions Student Loan	6	824	32.8	20.7	6	153	18.2	22.4	5	237	35.6	19.5	3	238	41.0	21.2	4	196	46.7	20.3
Self (work study (not industrial)	7	475	18.9	12.1	7	99	11.8	14.3	7	110	16.6	12.0	7	136	23.5	11.5	7	129	30.7	10.6
Health Professions Scholarship	8	281	11.2	14.1	12	42	5.0	27.2	12	33	5.0	11.7	8	97	16.7	13.6	8	109	26.0	10.7
Military	9	277	11.0	37.0	11	77	9.1	28.5	9,5	59	8.9	43.4	9	73	12.6	42.8	9	67	16.0	35.1
Other Loan	10	268	10.7	26.2	10	87	10.3	28.9	8	72	10.9	29.5	10	69	11.9	23.0	10	39	9.3	19.5
State Scholarship	11	241	9.6	15.8	9	88	10.5	20.0	9,5	59	8.9	16.7	11	59	10.2	10.0	11	34	8.1	14.2
Other	12	219	8.7	26.0	8	98	11.6	25.6	11	35	5.3	23.3	12	35	6.0	25.1	12	29	6.9	20.6
Other Scholarship	13	89	3.5	12.9	14	30	3.6	17.8	15	18	2.7	11.6	14	20	3.5	8.2	13	21	5.0	11.1
School/College Scholarship	14	85	3.4	8.8	15	22	2.6	10.5	14	22	3.3	9.1	13	21	3.6	8.6	14	20	4.8	6.9
Unknown	15	82	3.3	45.7	13	39	4.6	44.4	13	23	3.5	42.6	15	13	2.2	38.3	17	7	1.7	62.4
Optometric Society Scholarship	16	42	1.7	8.6	16	9	1.1	10.8	16	12	1.8	10.4	16	11	1.9	5.5	16	10	2.4	7.6
Fellowship	17	24	1.0	13.8	18	2	0.2	22.5	17	4	0.6	20.0	18	5	0.9	17.8	15	13	3.1	9.8
Private Industry Scholarship	18	21	0.8	10.1	17	4	0.5	12.8	18	3	0.5	11.7	17	8	1.4	14.3	18	6	1.4	1.0

Source: Data - Survey of Students Enrolled in Schools/Colleges of Optometry, 1975-1976.

[1] Includes 6 students of unknown class.

[2] "Average percent support provided by source" was computed as the arithmetic mean of the percentage support reported by students who indicated receiving support from the source and specified a percentage.

Appendix Table 15

NUMBER OF OPTOMETRY STUDENTS BY PRE-OPTOMETRIC EDUCATION, MAJOR FIELD AND OPTOMETRY SCHOOL ATTENDED: 1975-1976
(Survey Respondents Only)

Pre-Optometric Education	Major Field									
	Total	Biological Sciences	Physical Sciences	Math Sciences	Social Sciences	Pre-Optometry	Humanities	Engineering Sciences	Other Sciences	Unknown
All Schools	2536	805	148	73	188	143	32	31	144	972
Ph.D.	3	-	2	-	-	-	-	1	-	-
MA	95	31	10	8	13	3	3	3	23	1
BA	1337	725	112	62	172	99	27	24	107	9
AA	147	49	24	3	3	41	2	3	14	8
Unknown	954	-	-	-	-	-	-	-	-	954
Alabama	58	27	13	3	2	3	-	6	4	
Ph.D.	-	-	-	-	-	-	-	-	-	
MA	4	-	1	-	1	1	-	1	-	
BA	49	27	10	3	1	-	-	4	4	
AA	5	-	2	-	-	2	-	-	-	
Ferris	9	6	1	-	-	2	-	-	-	
Ph.D.	-	-	-	-	-	-	-	-	-	
MA	-	-	-	-	-	-	-	-	-	
BA	5	5	-	-	-	-	-	-	-	
AA	4	1	1	-	-	2	-	-		
Houston	88	34	6	3	5	23	1	3	11	
Ph.D.	-	-	-	-	-	-	-	-	-	
MA	5	1	1	1	-	-	-	-	2	
BA	74	30	5	3	5	20	1	2	8	
AA	9	3	-	1	-	3	-	1	1	
Illinois	206	114	16	13	30	8	5	2	18	
Ph.D.	-	-	-	-	-	-	-	-	-	
MA	11	2	-	2	2	1	-	-	4	
BA	162	94	11	10	28	1	5	2	11	
AA	33	18	5	1	-	6	-	-	3	
Indiana	108	48	16	9	14	66	-	3	12	
Ph.D.	2	-	2	-	-	-	-	-	-	
MA	6	3	2	-	-	1	-	-	-	
BA	151	44	11	9	13	62	-	2	10	
AA		1	1	-	1	3	-	1	2	
New England	121	57	11	7	25	1	3	4	10	
Ph.D.		-	-	-	-	-	-	1	-	
MA	1	1	1	1	2	-	2	-	3	
BA	11	55	10	6	23	1	3	3	7	
AA		1	-	-	-	-	1	-	-	
Ohio	45	25	7	4	1	1	1	-	6	
Ph.D.	-	-	-	-	-	-	-	-	-	
MA	1	-	-	-	-	-	-	-	1	
BA	40	24	5	4	1	-	1	-	5	
AA	4	1	2	-	-	1	-	-	-	
Pacific	124	52	12	7	13	16	3	3	18	
Ph.D.	-	-	-	-	-	-	-	-	-	
MA	7	-	-	2	3	-	-	-	1	
BA	106	49	11	4	9	10	3	3	17	
AA	11	2	1	1	1	6	-	-	-	
Pennsylvania	267	176	22	6	38	-	2	3	18	
Ph.D.	-	-	-	-	-	-	-	-	-	
MA	13	10	2	-	1	-	-	-	2	
BA	252	166	20	6	37	-	2	3	16	
AA	-	-	-	-	-	-	-	-	-	
Southern	167	100	13	7	21	6	5	-	15	
Ph.D.	-	-	-	-	-	-	-	-	-	
MA	7	2	1	-	2	-	1	-	1	
BA	133	85	5	7	18	1	3	-	14	
AA	27	13	7	-	1	5	1	-	-	
SCCO	231	124	21	6	30	14	6	3	27	
Ph.D.	-	-	-	-	-	-	-	-	-	
MA	17	8	-	-	1	-	-	1	7	
BA	181	108	16	6	29	2	6	2	12	
AA	33	8	5	-	-	12	-	-	8	
SUNY	78	42	10	6	9	3	1	2	5	
Ph.D.	-	-	-	-	-	-	-	-	-	
MA	11	3	2	2	1	-	-	1	2	
BA	65	38	8	4	8	2	1	1	3	
AA	2	1	-	-	-	1	-	-	-	

Source: Data - Survey of Students Enrolled in Schools/Colleges of Optometry, 1975-1976.

Appendix Table 16

PERCENT OF STUDENTS BY CLASS AND INITIAL AND ULTIMATE INTENDED ACTIVITY: 1975-1976
(Survey Respondents Only)

Intended Activity	Percent of Students									
	Total[1]		1st Year Students		2nd Year Students		3rd Year Students		4th Year Students	
	Initial	Ultimate	Initial	Ultimate	Initial	Ultimate	Initial	Ultimate	Initial	Ultimate
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Set Up Own Practice	13.2	49.3	11.8	55.4	12.0	50.8	12.2	46.0	19.4	39.6
Enter Partnership	21.7	15.5	22.0	12.1	23.4	14.3	21.8	17.5	18.3	21.3
Enter Group Practice	4.9	5.9	6.9	5.0	3.8	5.6	4.3	6.5	3.0	7.3
Participate Multidisciplinary Group Practice	2.6	6.9	3.3	6.0	2.9	8.3	2.4	7.9	1.4	5.4
Participate HMO	1.2	1.3	1.3	1.1	1.1	2.1	1.0	0.9	1.4	1.4
Work for Optometrist	24.3	0.5	23.9	0.4	25.4	0.6	24.7	0.5	22.5	0.7
Work for Ophthalmologist	1.1	0.5	0.7	0.9	1.2	0.3	1.2	0.5	1.4	0.0
Work for other Physician	a	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Work for Federal Government (Public Health Service, VA)	0.9	0.2	0.8	0.4	1.5	0.2	0.5	0.0	0.7	0.2
Enter Military	6.0	0.2	4.5	0.1	3.9	0.0	7.6	0.2	10.1	0.5
Work for State or Local Government	0.2	a	0.2	0.1	0.4	0.0	0.0	0.0	0.2	0.0
Work for Optometric Clinical Center	2.4	0.4	2.9	0.8	2.5	0.2	1.7	0.0	1.4	[illegible]
Work for Non-Profit Organization (Association, Foundation)	a	0.2	0.1	0.2	0.0	0.2	0.0	0.0	0.0	0.5
Work for Manufacturer, Business Firm	0.2	0.0	0.1	0.0	0.2	0.0	0.5	0.0	0.0	0.0
Enter Graduate School (Visual Science Discipline)	0.6	0.4	1.1	0.7	0.2	0.3	0.5	0.0	0.7	0.7
Enter Graduate School (Other Discipline)	0.3	0.2	0.1	0.1	0.3	0.3	0.2	0.3	0.9	0.0
Teach	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Multiple Response	12.2	7.5	12.4	6.6	11.7	6.9	12.5	7.7	11.9	9.4
Unknown	1.9	1.5	1.4	1.3	2.9	2.0	1.9	1.7	1.6	0.7
No Response	6.3	9.6	6.3	8.9	6.6	8.3	7.0	10.3	4.9	12.2

Source: Data - Survey of Students Enrolled in Schools/Colleges of Optometry, 1975-1976.

[1]Includes 6 students of unknown class year.

[a]Less than 0.05 percent.

METHODOLOGY

The Optometric Student Survey, 1975-1976, attempted to obtain from each student of optometry in the thirteen schools and colleges data that would describe the student population in terms of demographic and socioeconomic characteristics, prior education, financial resources, and expected professional settings. All of the schools and colleges of optometry, except one, the University of California, Berkeley, participated in the survey. Although some limited information was later obtained from Berkeley, this school was excluded from the analysis for reliability and validity. The limited data obtained from Berkeley was incorporated in tables inflated to represent all students, but excluded from tables containing data from survey respondents only.

The data were edited and processed by Control Data Corporation under subcontract to Optometric Manpower Resources Project (OMRP). The tables presented in Appendix II were generated using Control Data Corporation's current version of SPSS (Statistical Package for the Social Sciences). Table output limitations necessitated manual reformatting of several of the tables. Statistical testing of hypotheses discussed in the main body of this report was done by using the standard chi-square procedure for testing independence of variables in contingency tables. Test statistics were computed using a Texas Instruments SR51-II calculator and significance was determined from standard tables of the chi-square distribution.

Response Rates

At the time of the survey, there were 3,900 students enrolled in all optometric schools and colleges located in the United States. Of these, 2,536 students completed the questionnaire, yielding a response rate of 65 percent. Excluding Berkeley students, there were 3,665 students enrolled in the remaining twelve schools, for a response rate of 69 percent. As shown in Table III A.1, the response rates varied from school to school with a mean of 75.4 percent and a median of 77.7 percent, excluding Berkeley. These response rates are acceptable for a questionnaire distribution survey without centralized follow-up. Response rates by class showed a definite trend, as seen in Table III A.1. Response rate was inversely related to year of study, the first year class having the highest and the fourth year class the lowest response rate. Table III A.2 provides a more detailed breakdown of response rates for each class at each school.

Inflation

The basic concept of inflation is to multiply the responses received by an appropriate factor to generate data which represents 100 percent of the population surveyed. The most commonly used "inflation factor" is the inverse of the response rate. Thus, if the response rate for a survey was 95 percent, the inflation factor would be $1/0.95 = 1.05$. Since the response rates from the various schools of optometry ranged from 48 to 100 percent, it was felt that inflation by the inverse of school response rate would yield the most reasonable inflated data. Table III A.3 lists the inflation factors used for this survey.

Table III A.1

SURVEY RESPONSE RATES

A. By School

	Total Students	Responses	Percent
Alabama	107	91	85.0
Berkeley	236	-	-
Ferris	21	21	100.0
Houston	268	169	63.1
Illinois	570	447	78.4
Indiana	280	258	92.1
New England	285	165	57.9
Ohio	217	167	77.0
Pacific	303	201	66.3
Pennsylvania	554	319	57.8
Southern	592	285	48.1
SCCO	364	317	87.1
SUNY	104	96	92.3
All Schools	3900	2536	65.0
All Schools Except Berkeley	3665	2536	69.2

B. By Class

	Total Students[1]	Responses[1]	Percent
First Year	1015	854	84.1
Second Year	943	672	71.3
Third Year	865	583	67.4
Fourth Year	842	427	50.7

[1]Excluding Berkeley

TABLE III A.2

SURVEY RESPONSE RATES BY SCHOOL AND CLASS

SCHOOL		1st Year	2nd Year	3rd Year	4th Year	TOTAL
Alabama	T =	40	24	20	23	107
	R =	37	17	19	18	91
	% =	92.5	70.8	95.0	78.3	85.0
Berkeley	T[a] =					236
	R =	-	-	-	-	-
	% =	0.0	0.0	0.0	0.0	0.0
Ferris	T =	21				21
	R =	21	NA	NA	NA	21
	% =	100.0				100.0
Houston	T =	71	72	56	69	268
	R =	45	43	38	43	169
	% =	63.4	59.7	67.9	62.3	63.1
Illinois	T =	151	145	136	138	570
	R =	127	124	109	87	447
	% =	84.1	85.5	80.1	63.0	78.4
Indiana	T =	69	69	70	72	280
	R =	60	67	62	69	258
	% =	87.0	97.1	88.6	95.8	92.1
New England	T =	82	81	59	63	285
	R =	71	21	54	19	165
	% =	86.6	25.9	91.5	30.2	57.9
Ohio	T =	56	59	50	52	217
	R =	30	55	44	38	167
	% =	53.6	93.2	88.0	73.1	77.0
Pacific	T =	85	81	68	69	303
	R =	70	57	40	34	201
	% =	82.4	70.4	58.8	49.3	66.3
Pennsylvania	T =	140	137	133	144	554
	R =	132	117	55	16	320
	% =	94.3	85.4	41.4	11.1	57.8
Southern	T =	150	147	166	129	592
	R =	124	55	69	37	285
	% =	82.7	37.4	41.6	28.7	48.1
SCCO	T =	111	105	85	63	364
	R =	94	97	76	50	317
	% =	84.7	92.4	89.4	79.4	87.1
SUNY	T =	39	23	22	20	104
	R =	39	22	19	16	96
	% =	100.0	95.7	86.4	80.0	92.3

T Total Number Students
R Respondents
% Response Rate
a Nonrespondent Data Only - no responses

Table III A.3

INFLATION FACTORS

School	Inflation Factor
Alabama	1.176
Berkeley[1]	-
Ferris	1.000
Houston	1.585
Illinois	1.276
Indiana	1.086
New England	1.727
Ohio	1.299
Pacific	1.508
Pennsylvania	1.730
Southern	2.079
SCCO	1.148
SUNY	1.083

[1]Due to lack of participation, no responses received from Berkeley.

The recommendations of the "Preliminary Report on the Reliability and Validity of the Optometric Student Survey, 1975-1976", prepared under this contract prior to data analysis were followed with regard to data inflation. Only variables which were demonstrably similarly distributed among respondents and non-respondents were subjected to inflation. Thus, in Appendix II, Tables 1, 2a, 3, 4, 5, and 7, contain inflated data; i.e., the simulated distributions for all students. Table 6 was originally intended to contain inflated data, but the interaction of the inflation factors with the highly skewed response rates by class resulted in a very distorted inflated class distribution. Thus, it was decided to present this table including respondents only. The rest of the tables in Appendix II, Numbers 8 through 16 are presented for survey respondents only, since there was no means of assessing the probable distributions of non-respondents.

A very limited data set was obtained through administrative sources at the University of California, Berkeley. These data were included in the inflated tables, but were not inflated since there was no justification for doing so. Data on Berkeley students for the remaining tables were not obtainable and Berkeley was excluded from those analyses. The limitations of the inflated tables containing Berkeley data should be borne in mind, since Berkeley students are, in fact, considerably underrepresented.

Item Completion Rates

The number and percent of responses to each item on the questionnaire are given in Table III A.4. For items which were only to be completed if the preceding item was answered in a particular way, the percentage was computed on the basis of the

Table III A.4

ITEM COMPLETION RATES

Item #	Content	Responses	%
3	Permanent Residence	2464	97.2
4	Legal Residence	2511	99.0
5	Citizenship	2525	99.6
6	Sex	2526	99.6
7	Date of Birth	2475	97.6
8	Racial/Ethnic Background	2523	99.5
9	Marital Status	2527	99.6
10	Military Service	2499	98.5
11	Community of Permanent Residence	2475	97.6
12	Father's Education	2513	98.3
	Mother's Education	2513	99.1
13	Father's Occupation	2494	98.3
	Mother's Occupation	2375	93.7
14	Parent's Income	2484	97.9
15	Expected Costs	2512	99.1
16	Financing Sources	2511	99.0
17	Current Assets	2499	98.5
18	Expected Indebtedness	2518	99.3
19	Employment	2495	98.4
	Hours/Week	1042	98.9
20	High School Year Graduated	2498	98.5
21	High School Location	2510	99.0
22	Colleges Attended	2508	98.9
23	Other Health Professional Schools	2484	97.9
24	Other Optometry Schools	2507	98.9
	Which One	1446	99.4
25	Year Entered	2516	99.2
26	Year Expected Graduation	2515	99.2
27	Class	2532	99.8
28	Area of Interest	2395	94.4
	Intend to Specialize	1449	57.1
29	Initial Activity	2376	93.7
	Ultimate Activity	2293	90.4
30	Practice Community	2477	97.7
31	Community Selection	2348	92.6

number who should have responded. As can be seen clearly from the table, the item completion rates were quite uniformly high, with only six items less than 95 percent and only one less than 90 percent.

STATES INCLUDED IN REGIONS AND DIVISIONS

Census Regions

Northeast
- New England Division
- Middle Atlantic Division

North Central
- East North Central Division
- West North Central Division

South
- South Atlantic Division
- East South Central Division
- West South Central Division

West
- Mountain Division
- Pacific Division

Census Divisions

New England
- Connecticut
- Maine
- Massachusetts
- New Hampshire
- Rhode Island
- Vermont

Middle Atlantic
- New Jersey
- New York
- Pennsylvania

East North Central
- Illinois
- Indiana
- Michigan
- Ohio
- Wisconsin

West North Central
- Iowa
- Kansas
- Minnesota
- Missouri
- Nebraska
- North Dakota
- South Dakota

South Atlantic
- Delaware
- District of Columbia
- Florida
- Georgia
- Maryland
- North Carolina
- South Carolina
- Virginia
- West Virginia

East South Central
- Alabama
- Kentucky
- Mississippi
- Tennessee

West South Central
- Arkansas
- Louisiana
- Oklahoma
- Texas

Mountain
- Arizona
- Colorado
- Idaho
- Montana
- Nevada
- New Mexico
- Utah
- Wyoming

Pacific
- Alaska
- California
- Hawaii
- Oregon
- Washington

DHEW Regions

I
- Connecticut
- Maine
- Massachusetts
- New Hampshire
- Rhode Island
- Vermont

II
- New Jersey
- New York

III
- Delaware
- District of Columbia
- Maryland
- Pennsylvania
- Virginia
- West Virginia

IV
- Alabama
- Florida
- Georgia
- Kentucky
- Mississippi
- North Carolina
- South Carolina
- Tennessee

V
- Illinois
- Indiana
- Michigan
- Minnesota
- Ohio
- Wisconsin

VI
- Arkansas
- Louisiana
- New Mexico
- Oklahoma
- Texas

VII
- Iowa
- Kansas
- Missouri
- Nebraska

VIII
- Colorado
- Montana
- North Dakota
- South Dakota
- Utah
- Wyoming

IX
- Arizona
- California
- Hawaii
- Nevada

X
- Alaska
- Idaho
- Oregon
- Washington

SCHOOLS/COLLEGES

Alabama	University of Alabama, School of Optometry Birmingham, Alabama
Berkeley	University of California, School of Optometry Berkeley, California
Ferris	Ferris State College, College of Optometry Big Rapids, Michigan
Houston	University of Houston, College of Optometry Houston, Texas
Illinois	Illinois College of Optometry Chicago, Illinois
Indiana	Indiana University, School of Optometry Bloomington, Indiana
New England	The New England College of Optometry Boston, Massachusetts
Ohio	The Ohio State University, College of Optometry Columbus, Ohio
Pacific	Pacific University, College of Optometry Forest Grove, Oregon
Pennsylvania	Pennsylvania College of Optometry Philadelphia, Pennsylvania
Southern	Southern College of Optometry Memphis, Tennessee
SCCO	Southern California College of Optometry Fullerton, California
SUNY	State University of New York, College of Optometry New York, New York